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A CATALOGUE  
OF THE  
AMERICAN HESPERIIDAE  
IN THE  
BRITISH MUSEUM  
(NATURAL HISTORY)



A CATALOGUE  
OF THE  
AMERICAN HESPERIIDAE

indicating the classification and nomenclature adopted  
IN THE BRITISH MUSEUM  
(NATURAL HISTORY)

*by*  
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PART II  
(Groups B, C, D)  
PYRGINAE. Section 1

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## PART II

### PYRGINAE, Section I

Part I of the *Catalogue of the American Hesperiidæ* dealt with the first subfamily as "Group A. Pyrrhopyginae." There remain the subfamilies *Pyrginae*, *Hesperinae*, and *Megathyminae*.

The *Pyrginae* are defined as feeding upon dicotyledenous plants and in having vein 5 of the forewing generally nearer to vein 6 than to vein 4 at their origins. The subfamily is divisible into two Sections, as follows:

SECTION 1. Palpi erect: second segment appressed to the face: third segment not protruding in front of the second segment. Forewing cell generally long, equal to two-thirds of the length of the costa and equal to, or longer than, the dorsum.

SECTION 2. Palpi may be entirely porrect and the third segment always protrudes in front of the second segment. Forewing cell generally short, less than two-thirds of the length of the costa and shorter than the dorsum.

Part II of the Catalogue deals with Section 1 of the *Pyrginae*, which have been arranged in the following Groups.

**B. Augiades Group.** Third segments of palpi divergent. Wings erect in repose.

**C. Urbanus Group.** Third segments of palpi parallel. Forewing veins 6 and 7 approximate at their origins. Wings erect in repose.

**D. Celaenorrhinus Group.** Third segments of palpi parallel. Forewing veins 7 and 8 approximate at their origins. Wings flat in repose.

Groups B and C are confined to America. Group D occurs also in tropical Africa, Asia and Australia.

## PYRGINAE

The Section comprises 42 genera, 307 species and 173 sub-species. There are 37 synonyms of generic and 313 of specific or sub-specific names. The material in the British Museum appertaining to the Section consists of 20,000 specimens, including 128 types of species, 103 of sub-species and 60 of synonyms. The following 6 species are not represented: *Phocides imbreus*, *Drephalys atinas*, *Aguna camagura*, *Salatis fulvomarginatus* and *scyrus*, *Celaenorrhinus anchialus*: 4 new genera, 45 new species and 66 new sub-species are described in this part.

The keys are of the form introduced by the author in his *Identification of Indian Butterflies*, 1923, and the same simple abbreviations have been used, viz.: upf, uph, unf, unh for upperside of forewing, etc., and F, H for forewing or hind-wing. Apiculus is used for the reflexed portion of the antennal club and nudum for the sensory, bared segments of the antennae, lying on the apiculus and sometimes on the un-reflexed portion of the club: nudum 9/15 means 9 segments on the club and 15 on the apiculus.

The genitalia diagrams have been drawn freehand by the author from dissections on the dry system, left on the abdomen or mounted on cards. The diagrams are not to scale and are intended to indicate the differences between species or sub-species. Generally, the first figure is the ventral view of the uncus, gnathos and aedeagus: second figure view from left side of the same: third figure inside of left clasp: fourth figure inside of right clasp. The first, second and fourth figures are omitted, if the differences are insignificant. If the female genitalia are figured, it is the ventral view of the ostium bursae.

The index refers to the Group letter, generic number and specific number, and can be used for the keys or for the plates.

Several changes in nomenclature have been found necessary, but, to save space, the reasons have not been given. Each case has been carefully considered and recorded in the B.M. card index.

No bibliography has been furnished. The date has been given after every published name and the full reference can be obtained from the *Zoological Record*, or in most cases

from the principal works dealing with the American HesperIIDae, which are:

- 1887-1900. *Biologia Centrali Americana. Insecta. Lepidoptera. Rhopalocera*, vol. 2 and vol. 3, plates. Godman and Salvin.
- 1921-4. *Macrolepidoptera of the World*. A. Seitz, vol. 5: *America*. Grypocera by M. Draudt.
1931. *The Butterfly Book*. W. J. Holland. Figuring all species occurring in Canada and the U.S.A.
1931. *The Hesperioidea of N. America*. Lindsey, Bell and Williams. Figuring the genitalia of all species.
1948. *Genera et Species Animalium Argentinorum*, vol. 1: *Pyrrhopyginae and Pyrginae*. K. J. Hayward. vol. 2: *Hesperinae*, is in the press.





## Group B. AUGIADES GROUP

### ANALYSIS OF GENERA

Defined primarily by the peculiar palpi: 3rd segment stout, spatulate, set on the outer edge of the 2nd segment, divergent. The character is well marked except in the first two and the last genera. *Phocides* and *Hypocryptothrix* are very much more closely allied to *Tarsoctenus* than to any other Hesperiid genus: all these 3 genera are "mimics" or close relatives of the *Pyrrhopyginae*. *Cabirus* likewise is closer to *Entheus* than to any other genus.

F cell long, at least =  $\frac{2}{3}$  costa. Some species display a remarkable sexual dimorphism and a very general feature, peculiar to the group, is the presence of 2 hyaline spots in the cell.

The group is confined to Central and South America and appears to have attained its maximum development in the Guianas and Lower Amazon area. It has no allies in the Old World.

1a (11). Antennae with an apiculus as usual.

1b (3a). Palpi with 3rd segment central, not divergent.

1 (2). F venation peculiar: discocellular vein between origins of veins 4 and 5 arched and very long, twice as long as the distance between the origins of veins 3 to 4 and of 5 to 6: also veins 7 and 8 run contiguously for  $\frac{1}{3}$  of their length from the cell. Antennae  $\frac{1}{2}$  costa: nudum 16/32, apiculus angled or hooked. ♂ upf with a costal fold. Mid tibiae occasionally spined. Like various *Pyrrhopyginae*.

**Phocides.** 18 species. Texas to Argentine and the West Indies.

2 (1). F venation normal: vein 4 mid veins 3 and 5. Antennae  $\frac{1}{2}$  costa: nudum 16/15, angled. ♂ upf with a costal fold: unf with a conspicuous tuft of brown hairs in a

GROUP B. AUGIADES

polished area, directed obliquely forward from before the middle of vein 1 and reaching vein 2: uph costa widened in middle: H vein 7 arising just after origin of vein 8. General appearance of *Pyrrhopyge rubricollis*.

**Hypocryptothrix.** 1 species. Upper Amazon: W. Bolivia.

**3a** (1b). Palpi normal for group.

3b (8a). Antennae bent after beginning of nudum.

3c (7). Antennae =  $\frac{1}{2}$  costa.

3d (5a). F cell as long as end of vein 2. ♂ with costal fold.

3 (4). Uph without hyaline markings. H tibiae without the upper pair of spurs: in ♂, one of the lower spurs is lengthened and runs inside a double fringe of yellow bristles on the tarsus: a somewhat similar feature occurs in *Chrysoplectrum*. Nudum of antennae 27/12, angled.

**Tarsoctenus.** 3 species. Nicaragua to Bolivia and Bahia: Trinidad.

**4** (3). Uph and upf with numerous hyaline markings unlike any other Hesperiid. Nudum 8/17, arcuate.

**Phanus.** 4 species. Mexico to Bolivia and S. Brazil: Trinidad.

**5a** (3d). F cell not so long as end of vein 2.

5 (6). H produced at end of vein 3 as well as at end of vein 1b. F cell short, < end of vein 1. F and H with hyaline spots: on F 2 spots in cell and in space 2. ♂ usually with costal fold. Nudum 7/14, hooked.

**Udranomia.** 4 species. Mexico to S. Brazil.

**6** (5). H not produced at end of vein 3. F cell at least as long as end of vein 1. H spots usually opaque: F with a central spot in space 1b, a single spot in space 2 and 2 cell spots. ♂ with or without a costal fold. Nudum typically 16/15, arcuate or hooked.

**Drephalys.** 13 species. Honduras to Amazons.

**7** (3c). Antennae short, <  $\frac{1}{2}$  costa: nudum 7/16, arcuate. Uph without spots: upf with or without spots. ♂ with a costal fold.

**Augiades.** 2 species. Mexico to S. Brazil.



**8a (3b).** Antennae bent at beginning of nudum, 22–24 segments.

**8b (10).** F vein 4 twice as far at origin from vein 3 as from vein 5. ♂ with costal fold.

**8 (9).** H normal, produced at vein 1 B. Unmarked, or with hyaline spots F, including 2 in cell and 1 or 2 outer spots in space 1b.

**Hyalothyrus.** 5 species. Honduras to Amazons.

**9 (8).** H abnormal, produced at vein 4 and rounded to vein 1A. H tibiae with only 1 pair of spurs. Tegulae unusually long and dense. ♂ uph with a tuft of dark hairs on either side of a bare area along vein 1A, correlated to short tufts on either side of the abdomen. Upf single spot in cell, double at tornus.

**Phareas.** 1 species. Colombia to Peru and Amazons.

**10 (8b).** F vein 4 mid veins 3 and 5. ♂ without costal fold.

In 4 species in ♂ the H tibiae have the upper spurs absent and there is a recumbent hair pencil outside the swollen tarsus. Upf single cell spot.

**Entheus.** 5 species. Mexico to S. Brazil.

**11 (1a).** Antennae abnormal, no apiculus and only slightly thickened club: nudum 15. Palpi slender, 3rd segment central. H tibiae with only 1 pair of spurs. F cell long, end rounded. H apex produced, tornus rounded and dorsum short. ♂ no costal fold.

**Cabirus.** 1 species. Ecuador to Peru and Matto Grosso.

## ANALYSIS OF SPECIES

**B.I. PHOCIDES** Hübner 1819: type *polybius* Fabricius: only valid species included was *palemon* Cramer, as *cruentus*, selected by Scudder 1875, was a nomen nudum: *palemon* is a homonym of *palaemon* Pallas 1771 and so *polybius* the next oldest name becomes the type.

Synonyms. *Erycides* Hübner 1819: type *pigmalion* Cramer. *Dysenius* Scudder 1872: type *albicilla* Herrich-Schäffer.

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A very uniform genus in respect of structure and genitalia: uncus long, slender, undivided, flanked by slender flanges: aedeagus short. Genitalia fig Bell 1932.

1a (3a). Unh and uph unmarked. Cilia F white.

1 (2). Collar and palpi red. Upf with a red cell spot, extending to costa. ♂ F 26 mm. Resembles *Amenis*.

**polybius**. 3 sub-species.

(a). Cilia H entirely white and termen evenly narrow white.

Sub-sp. *lilea* Reakirt 1866: Mexico. Fig Seitz: G & S, ♂ and genitalia.

Synonyms. *albicilla* Herrich-Schäffer 1869: ? loc.

*socius* Butler & Druce 1872: ♂ Costa Rica: type B.M.

*cruentus* Scudder 1872: Guatemala (nomen nudum Hubner 1819). Fig Hayward 1948, ♂ and genitalia = *phanias*.

*sanguinea* Scudder 1872: Texas.

*decolor* Mabilie 1880: no loc: type B.M.

*albiciliata* Röber 1925: Guatemala.

B.M. 7 ♂ 7 ♀ Mexico. 6 ♂ 5 ♀ Guatemala. 14 ♂ 3 ♀ Honduras. 4 ♂ 2 ♀ Costa Rica.

(b). Cilia H orange at tornus, extending usually to middle of space 1c: white edging to termen comparatively broad and irregular inwardly. Termen more or less concave centrally, particularly, as in many species of *Phocides* and the *Pyrrhopyginae*, from Guiana.

Sub-sp. **polybius** Fabricius 1793: "Indiis": fig Jones Icones.

Synonyms. *palemon* Cramer 1779: Surinam: fig 131F, homonym of *palaemon* Pallas 1771.

*gunderi* Williams & Bell 1931: Br Guiana. Aberration with the red spot upf absent.

B.M. 5 ♂ 3 ♀ Panama. 9 ♂ Colombia. 4 ♂ 1 ♀ Venezuela. 2 ♂ 1 ♀ Br Guiana. 2 ♂ 1 ♀ Fr Guiana. 2 ♂ 2 ♀ Surinam. 1 ♂ Pará. 7 ♂ 4 ♀ Trinidad.

(c). Uph the orange cilia at tornus extending usually to the end of vein 2: termen narrowly and evenly white as in *lilea*.

Sub-sp. **phanias** Burmeister 1880: Argentine: figured. Fig Hayward 1948.

Synonyms. *spurius* Mabilles 1880: ♂ no loc: type B.M. Fig Seitz.

*unimacula* Mabilles & Boulet 1912: Argentine. Aberration with the red cell spot upf absent. Fig Hayward 1948.

*palemonides* Röber 1925: ♂ no loc.

B.M. 1 ♂ Bolivia. 21 ♂ 15 ♀ Brazil (Pará to S. Brazil). 6 ♂ 3 ♀ Paraguay. 9 ♂ 9 ♀ Argentine.

2 (1). Collar and palpi black with some white hairs. Unmarked. Cilia at tornus H dull pale yellow to vein 2. ♂ F 25 mm.

**charon.** Felder 1859: ♂ Brazil: type B.M. Fig Hayward 1948.

Synonyms. *scythron* Godman & Salvin 1879. ♂ Paraguay: type B.M. Fig Hayward 1948, ♂ and genitalia.

*tophana* Plötz 1879: Brazil. Fig Seitz.

B.M. 15 ♂ 2 ♀ S. Brazil (São Paulo. Parana. Blumenau). 19 ♂ 1 ♀ Paraguay. 2 ♂ 1 ♀ Argentine. Rarely traces of blue stripes.

3a (1a). Unh more or less striped.

3b (15a). Above and below, normally blue striped and with conspicuous white hyaline spots upf. Resemble *femadia*, but the basal blue stripes upf are parallel with the veins instead of across them.

3c (12a). Abdomen, white or pale blue striped at the sides only, leaving an unstriped dark brown dorsal ridge.

3d (9a). Mid tibiae smooth. Striping of abdomen broad, particularly towards thorax.

3 (4a). Upf blue stripes in spaces 1a and 1b centrally widely disrupted into 2 subequal spots under the central hyaline band and 2 short basal streaks. ♂ F 24 mm.

**distans.** 3 sub-species.

(a). Upf central hyaline spots in spaces 3 and 4 narrow, < 1 mm.

Sub-sp. **licinus** Plötz: 1879: ♂ Chiriqui.

Synonyms. *sigovesus* Möschler 1880: to replace *licinus*, if preoccupied by Edwards 1871, which is not the case.

B.M. 1 ♂ 1 ♀ Honduras. 1 ♀ Costa Rica. 7 ♂ 3 ♀ Panama.

(b). Upf central band wider,  $1\frac{1}{2}$  mm. Uph outer discal band narrow.

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Sub-sp. **distans** Herrich-Schäffer 1869: no loc. Fig Seitz: G. & S.

Synonyms. *nakawara* Weeks 1906: ♂ Venezuela. Fig Weeks 1911.

B.M. 1 ♂ Venezuela. 1 ♀ Br Guiana. 1 ♂ 1 ♀ Amazons (Ega). 1 ♂ Rio Madeira.

(c). Similar, but the blue markings on all wings much brighter and more developed, particularly the submarginal band uph and unh.

Sub-sp. **silva** nov: ♂ Tarapote, Peru.

B.M. 4 ♂ type loc.

4a (3). Upf the blue stripes in spaces 1a and 1b not widely disrupted: stripe in space 1a usually reaches the blue submarginal band.

4 (5a). Unh the central blue stripe broader than usual at the costa and tapering to a point at its lower end in space 3. Upf basal striping more extensive, and uph submarginal band more regular, than usual. ♂ F 33 mm.

**perillus** Mabilie 1888: ♂ Colombia: figured. Fig Bell 1932.

B.M. 17 ♂ Colombia (Cauca. Manizales. Bogotá). 1 ♂ Ecuador (Balzapamba). 1 ♂ "Brazil".

5a (4). Unh central blue stripe of nearly equal width throughout and often curved.

5b (8a). Upf and unh central band not looped to the lower part of the submarginal band, which is continuous. Upf stripe in space 1a centrally broken: stripe in 1b short, not reaching the discal band. 3 very similar species differing principally in the clasp form.

5 (6.7). Inner face of cuiller concave, leaving valva uncovered.

**metrodorus**. 3 sub-species.

(a). Upf submarginal blue band continued into space 7 and increasing towards the costa as in *perillus*. Upf basal blue stripes short and often obscure: a single blue bar under the hyaline discal band in space 1a, a unique type of marking: hyaline spots in spaces 3 and 4 very slender or absent, as is usual in the Northern sub-species of many *Jemadia* and *Phocides* species: rarely an apical dot in space 9. ♂ F 28 mm.



Sub-sp. **nigrescens** Bell 1938: ♂ Colombia: genitalia figured.

B.M. 11 ♂ 1 ♀ Colombia (Cauca. Rio Chili. Rio Dagua).  
1 ♂ Venezuela. 1 ♂ Ecuador (Paramba). 1 ♂ Peru.

(b). Upf central and sub-apical hyaline bands half the width of the discal band. Upf always a dot in space 9, otherwise exactly like *xenocrates*. ♂ F 27 mm.

Sub-sp. **metroductor** Bell 1932: ♂ Colombia: figured.

B.M. 1 ♂ 1 ♀ Panama. 6 ♂ 1 ♀ Colombia. 1 ♂ Ecuador.  
7 ♂ Peru (La Merced. Rio Pacaya. Rio Colorado. Tarapote).  
7 ♂ Bolivia. 3 ♂ Amazons (Teffe. Iquitos. Pará).  
3 ♂ 2 ♀ Brazil (Espírito Santo).

(c). Smaller, ♂ F 25 mm. Upf central and sub-apical hyaline bands nearly as wide as the discal band.

Sub-sp. **metron** nov: ♂ Paraguay: type B.M.

B.M. 2 ♂ Paraguay.

**6** (5.7). Inner face of cuiller straight and toothed throughout, completely covering the valva. Upf no spot in space 9. ♂ F 30 mm.

**xenocrates** Bell 1932: ♂ Colombia: figured.

B.M. 8 ♂ Colombia. 2 ♂ Ecuador (Zamora. Loja). 20 ♂ Peru (Charape. Chanchamayo. La Merced. Chachapoyas. Pozuzo. Moyabamba. Rio Colorado. Rio Palcaza). 8 ♂ Bolivia. A ♂ aberration (Peru) has all the markings much reduced.

**7** (5.6). Inner face of cuiller only toothed at the distal end and the back crested. Large ♂ F 32 mm. Uph and unh submarginal band more irregular towards apex.

**novalis** nov: ♂ Rio Colorado, Peru: type B.M.

B.M. 4 ♂ Peru (Rio Colorado. Pebas. Perene).

**8a** (5b). Uph and unh the central blue band looped to the lower part of the submarginal band.

**thermus**. 3 sub-species.

(a). Upf central spots in spaces 3 and 4 slender, or absent: sub-apical spots narrow and the spot in space 10 usually absent: upper basal stripes very short: stripe in space 1a distinctly broken. Resembles *pigmalion* and *nigrescens*.  
♂ F 30 mm.

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Sub-sp. **thermus** Mabilie 1883: ♂ Colombia: type B.M. Fig Bell 1932.

B.M. 1 ♂ Guatemala. 1 ♂ 1 ♀ Honduras. 6 ♂ Panama. 28 ♂ Colombia. 2 ♂ Venezuela. 7 ♂ Ecuador (Paramba). (b). Upf the central and apical spots much wider, as in *hewitsonius*: lowest blue stripe entire, though sinuous: upper blue stripes only half-way to the discal band. Abdomen near thorax nearly all white at sides, instead of broadly blue striped as in *hewitsonius*. ♂ F 28 mm.

Sub-sp. **bellina** nov. ♂ Macas, E. Ecuador: type B.M. Fig by Bell 1932 as *valgus*. B.M. 4 ♂ Venezuela. 2 ♂ Ecuador. 2 ♂ Peru (Tarapote. La Merced). 4 ♂ Up Amazons (Pebas. Up Putumayo). 5 ♂ Matto Grosso.

(c). Similar, but upf the blue markings paler and more developed: the upper basal striping extending nearly to the discal band, as in *perillus*: stripe in space 1b longer and nearly reaches the submarginal blue band. ♂ F 28 mm.

Sub-sp. **valgus** Mabilie 1883: ♂ "Cayenne" (probably S. Brazil): type B.M. Fig Bell 1932.

B.M. 9 ♂ S. Brazil (Espírito Santo. São Paulo. Goyaz. Rio das Valhas).

9a (3d). Mid tibiae spined. 3 similar species with constantly different genitalia.

9 (10a). Unf in space 1b with a conspicuous oval patch of pale blue scales. Superficially like *hewitsonius*. Upf usually no spot in space 9: upper basal blue stripes short, lower 2 stripes tend to be obsolete centrally. Uph submarginal blue band reduced and irregular. Unh submarginal band broader and more regular than usual. ♂ F 30 mm.

**partia** nov: ♂ Rio Colorado, Peru: type B.M.

B.M. 3 ♂ Peru (Rio Colorado. Rio Maranon. Tarapote). 1 ♂ Bolivia.

10a (9). Unf in space 1b no oval patch, but sometimes a blue dash.

10 (11). ♂ upf costal fold vestigial. Very like *hewitsonius*. Upf upper basal stripes short. Uph submarginal blue

band reduced and irregular. Clasp much broader. ♂ F 32 mm.

**padrona** nov: ♂ Cajon, Cuzco, Peru: type B.M.

B.M. 1 ♂ Fr Guiana. 1 ♀ Br Guiana. 3 ♂ 1 ♀ Peru (Cuzco. Rio Peruya). 1 ♀ Pará. 1 ♀ "Brazil".

11 (10). ♂ upf costal fold always conspicuous. Genitalia with uncus flanges as long as the uncus in continental sub-species: in island sub-species the flanges are short as in all other species of the genus.

**pigmalion**. 6 sub-species.

(a). Upf hyaline markings very broad, bands nearly touching, post-discal band on vein 4, 2 to 4 mm. wide: sub-apical spot in space 9 conspicuous: costal spot over cell spot vestigial. ♂ F 26 mm.

Sub-sp. **belus** Godman & Salvin 1893: ♂ Mexico: type B.M.: figured. Fig Seitz.

B.M. 2 ♂ 1 ♀ Mexico.

(b). Upf hyaline spots much narrower, from 2 mm. to complete absence: spot in space 9 rarely present: costal spot over cell spot usually conspicuous: upper basal blue streaks often absent. ♂ F 30 mm.

Sub-sp. **pigmalion** Cramer 1779: "Surinam": fig 245 A.B. Fig Seitz: G & S, genitalia. Fig Hayward 1948, ♂ and genitalia = *hewitsonius*.

Synonyms. *tenuistriga* Mabilille & Bouillet 1912: ♂ Colombia: type B.M.

*vulcanides* ♂, *iocularis* ♂, *disparilis* ♀, Rober 1925, are believed to be minor variations of *pigmalion*.

B.M. 7 ♂ Guatemala. 18 ♂ Honduras. 2 ♂ 1 ♀ Nicaragua. 1 ♂ Costa Rica. 6 ♂ Panama. 33 ♂ 2 ♀ Colombia. 2 ♂ 2 ♀ Venezuela. 1 ♀ Trinidad. 4 ♂ 1 ♀ Ecuador (Quito. Paramba).

(c). More like *belus*, central band in space 3 and 4 is 2 to 3 mm. wide upf: spot in space 9 small or absent: spot on costa over cell spot conspicuous. ♂ F 28 mm.

Sub-sp. **hewitsonius** Mabilille 1883: ♂ Amazon: type B.M. Fig Hewitson 1861 as *pigmalion* and Hayward 1948, ♂ and genitalia.

Synonyms. *aberrans* ♂ Peru, *jemadides* ♂ Bolivia: Röber 1925.

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B.M. 4 ♂ Ecuador (Zamba. Paramba). 1 ♂ Venezuela (Caura Riv). 1 ♂ Br Guiana. 1 ♂ E. Peru (Chirimayo). 6 ♂ Bolivia. 22 ♂ 9 ♀ Amazons to S. Brazil. 12 ♂ Paraguay. 3 ♂ Argentine.

(d). Upf hyaline discal band narrow,  $1\frac{1}{2}$  mm. Blue markings much greener. ♂ F 27 mm.

Sub-sp. **bicolora** Boddaert 1783: named from D'Aubenton's figure of a specimen from Haiti.

Synonym. *pyres* Godman & Salvin 1879: ♀ Haiti: type B.M.

B.M. 8 ♂ 8 ♀ Haiti. 1 ♂ Puerto Rico.

(e) Upf unmarked except for vestigial basal blue striping.

Uph more or less striped. ♂ F 25 mm.

Sub-sp. **batabano** Lucas 1857: Cuba. Fig Seitz.

Synonyms. *mancinus* Herrich-Schäffer: Cuba.

*batabanoides* Holland 1902: Bahamas.

B.M. 11 ♂ 6 ♀ Cuba. 2 ♂ Cayman Is. 1 ♂ Bahamas.

(f). Similar, but upf striping absent, much reduced on uph and unh, obsolete on abdomen.

Sub-sp. **okeechobee** Worthington 1881: Marco Is., Florida.

B.M. 17 ♂ 11 ♀ Florida.

**12a** (3c). Abdomen, blue or green striping continuous over the back, leaving no brown dorsal ridge.

**12b** (14). Palpi white as usual. Uph the stripe from the base of the cell, which in the *pigmalion* group crosses the cell and runs along vein 2, is replaced by a short stripe in the cell and a longer one below the cell. Thorax unstriped.

12 (13). Upf striping blue: markings as in *urania*, but the hyaline spots in spaces 5 and 6 are large and conjoined as in the *pigmalion* group. Resembles *valgus* and has the same wing shape. ♂ F 27 mm. Genitalia like *urania*.

**johnsoni** Bell 1947: ♂ Cauca, Colombia: fig genitalia.

B.M. 2 ♂ Colombia (Rio Chili).

**13** (12). Upf striping green: wings more produced.

**urania**. 2 sub-species.

(a). Upf with hyaline spots as in the *pigmalion* group, but those in spaces 5 and 6 are small and separate. ♂ F 29 mm.



Sub-sp. **urania** Westwood 1852: ♂ Mexico: type B.M. Fig Seitz: G & S, genitalia.

Synonym. *texana* Scudder 1872: Texas.

B.M. 15 ♂ 1 ♀ Mexico. 9 ♂ 1 ♀ Guatemala.

(b). Similar, but upf hyaline spots absent. ♂ F 28 mm.

Sub-sp. **vida** Butler 1872: ♂ Costa Rica: type B.M. Fig Butler 1874: Seitz.

B.M. 6 ♂ Costa Rica.

**14** (12b). "Palpi orange. Wing bases green. Cilia white. Upf dark blue spot mid cell." The figure has a green spotted collar and green striped thorax. Unh broad blue stripe along dorsum. Unf space 1a red. ♂ F 27 mm.

**imbreus** Plötz 1879: C. America. Fig Seitz.

B.M. None.

**15a** (3b). Above not *Jemadia*-like.

15b (18). Upf with orange hyaline spots or tawny stripes uph or both. Resembling *Mimoniades*.

15c (17). Unh with blue stripes.

15 (16). Uph all the stripes blue or green.

**pialia**. 3 sub-species.

(a). F hyaline band broadening at dorsum and on vein 2 is 6 mm. wide: no apical spot in space 9. H striping blue. ♂ F 32 mm. Palpi brown with a few white hairs.

Sub-sp. **maximus** Mabilille 1888: ♀ Brazil: figured.

B.M. 4 ♂ 2 ♀ Brazil (São Paulo. Petropolis. Rio. Espirito Santo. Novo Friburgo).

(b). Similar, but hyaline band upf of uniform width  $3\frac{1}{2}$ -4 mm. wide: apical spot in space 9 present or absent. ♂ F 31 mm.

Sub-sp. **parvus** Röber 1925: ♂ São Paulo.

Synonym. *zancleius* Bell 1932: ♂ Blumenau: genitalia fig.

B.M. 6 ♂ 1 ♀ Brazil (São Paulo).

(c). F hyaline band 3 mm. wide: sub-apical spot in space 9 always present. H striping green and more pronounced. Palpi about half brown and half white. ♂ F 31 mm.

Sub-sp. **pialia** Hewitson 1857: ♂ Brazil: type B.M. Fig Seitz.

B.I. PHOCIDES

B.M. 1 ♂ 1 ♀ Minas Geraes. 3 ♂ 3 ♀ Parana. 1 ♂ 2 ♀ Rio Grande do Sul. 1 ♂ Espirito Santo. 6 ♂ 4 ♀ "Brazil".

**16** (15). Uph striping tawny except for the greenish spots. Palpi below, white striped, cheeks yellowish, pectus white striped. Genitalia very like those of *yokhara*. ♂ F 31 mm.

**oreides**. 2 sub-species.

(a). Upf hyaline spots white: ray in space 1a unbroken. Sub-sp. **columbiana** Bell 1938: ♂ Colombia.

B.M. None.

(b). Upf hyaline spots orange: ray in space 1a divided. Sub-sp. **oreides** Hewitson 1874: ♂ Pará: type B.M.: figured (*oreades* on plate). Fig Seitz: Staudinger 1889.

B.M. 16 ♂ Peru (Rio Colorado. Chanchamayo. Perene. Cuzco).

**17** (15c). Unh and elsewhere striping tawny. ♂ F 34 mm. **yokhara**. 4 sub-species.

(a). Upf and uph markings fully developed. Unf no submarginal band of yellow spots. Unh submarginal spot in space 1c tapers to vein 1b. Palpi and pectus black.

Sub-sp. **yokhara** Butler 1870: ♂ Peru: type B.M. Fig Seitz. B.M. 3 ♂ Colombia (Popoyan. Bogotá). 24 ♂ Ecuador (Ambato. Rio Pastaza. Banos. Canales). 3 ♂ Peru (Amazonas, Chachapoyas).

(b). Similar, but uph markings reduced to a short sub-basal stripe and a submarginal band. Upf typically with the usual hyaline spots, but they may be completely absent.

Sub-sp. **inca** Le Cerf 1922: ♂ Charape Riv, Peru: type B.M. Synonym. *pratti* Le Cerf 1922: ♂ Charape Riv, Peru: type B.M.: form without spots uph.

B.M. 2 ♂ (*inca*) 8 ♂ (*pratti*). Type loc.

(c). Unf and upf with submarginal ochreous scaled spots: otherwise as *yokhara*. Palpi and pectus often show traces of white or yellow scales.

Sub-sp. **dryas** Le Cerf 1922: ♂ N. Peru.

B.M. 1 ♂ Colombia (Cauca). ♂ "Br Guiana". 22 ♂ Peru (Perene. San Ramon. Huayabamba. Huambo. Pozuzo. Rio Colorado. Chanchamayo).

## B.2. HYPOCRYPTOTHRIX

(d). Markings much yellower: upf submarginal band and striping show a tendency to blue scaling. Palpi below centrally yellow, cheeks yellow, pectus white haired. Type has a *dryas* head, affixed to replace the original head.

Sub-sp. **charonotis** Hewitson 1874: ♂ Bolivia: type B.M. Fig Seitz.

Synonyms. *oreas* and *deborā* Mabilie & Boullet 1912: both ♂, Bolivia.

B.M. 2 ♂ "Peru" (probably Bolivia). 6 ♂ Bolivia.

**18** (15b). Above, ochreous brown with white hyaline spots upf arranged as in *pigmalion*. Unh darker brown with yellow bands, also as in *pigmalion*. Palpi below, and pectus, yellow.

**lincea**. 2 sub-species.

(a). Upf hyaline spots very large and the discal band extending into space 1b. Unh yellow bands as broad as the dark areas between them. ♂ F 32 mm.

Sub-sp. **lincea** Herrich-Schäffer 1869: no loc. Plötz MS figure in B.M.

B.M. 3 ♂ French Guiana and no loc.

(b). Upf hyaline spots reduced and not entering space 1b. Unh yellow bands much narrower than the dark intervals. ♂ F 27 mm.

Sub-sp. **perkinsi** Kaye 1931: ♂ Jamaica.

B.M. 3 ♂ 3 ♀ Jamaica.

**B.2. HYPOCRYPTOTHRIX** Watson 1893: type *teutas* Hewitson: fixed by author.

Single species. Above, dark shining blue. Upf with a central band of 3 large hyaline spots in cell, spaces 2 and 3, conjoined. Uph unmarked. Below as above. Head white spotted: collar, patagia and base of tegulae red. Below, palpi, pectus and legs white striped. ♂ F 22 mm.

**teutas** Hewitson 1878: ♂ St Paulo, Upper Amazons: type B.M. Genitalia fig by Williams & Bell 1933.

B.M. 1 ♂ type. 1 ♂ San Augustin, Mapiri, W. Bolivia.

B.3. TARSOCTENUS

**B.3. TARSOCTENUS** Watson 1893: type *praecia* Hewitson: fixed by author as *plutia* Hewitson, a sub-species of *praecia*.

A genus intermediate between *Phocides* and *Augiades*, having the palpi as specified for the group. Uncus simple, pointed, with more or less developed short flanges.

1a (3). F with a hyaline spot before end cell, between the central cell spot and the apical spots.

1 (2). ♂ ♀ alike, with hyaline spots on F and blue stripes on both wings, as in *Jemadia*, *Granila* and *Phocides* (*pigmalion* group). Upf a blue bar defining end cell. Unh blue spot end cell against, and in line with, the spots in spaces 6 and 7 above it. ♂ F 24 mm.

**papias** Hewitson 1857: ♀ Amazons: type B.M.: figured. Fig Seitz. Genitalia fig. Williams & Bell 1933.

B.M. 2 ♂ Br Guiana. 15 ♂ 5 ♀ Amazons (Pará to Upper Putumayo).

2 (1). ♂ without blue striping: above, thorax and wing bases broadly orange or red: unh plain black except for some yellow or red scaling at the base. ♀ entirely different, blue striped and very like *papias*, but unh the spot end cell is completely separate from the spots in spaces 6 and 7. ♂ F 23 mm. ♂ resembles species of *Aspitha*.

**corytus**. 3 sub-species.

(a). F lower spot in space 1b small, rhomboidal. ♂ thorax and bases orange: upf 5 apical spots, in spaces 4 to 8. ♀ striping bright blue.

Sub-sp. **guadialis** Hewitson 1876: ♂ Chiriqui. Fig G & S. Fig Seitz as *dubius* but colouring too red.

Synonym. *perissographus* Mabilie 1889: ♀ Chiriqui: type B.M.: figured. Fig G & S: Seitz.

*dubius* Draudt 1921: name on plate, *guadialis* in text.

B.M. 1 ♂ Nicaragua. 6 ♂ 6 ♀ Panama. 8 ♂ 2 ♀ Colombia.

(b). F lower spot in space 1b very narrow and elongate. ♂ above, thorax and bases orange: apical spots reduced to from 1 to 4. ♀ striping whiter.

Sub-sp. **corytus** Cramer 1777: ♂ Surinam: fig 100C. Fig Seitz.



Synonym. *pyramus* Cramer 1782: ♂ Surinam: fig 245E. B.M. 3 ♂ Pará.

(c). Similar to *corytus*, but in ♂ thorax and bases red: below, pectus and base unh red instead of yellow: upf spot in space 3 often reduced or absent and sometimes no apical spots.

Sub-sp. **corba** nov: ♂ Pebas, Amazonas: type B.M.

B.M. 1 ♂ Br Guiana. 1 ♂ Ecuador. 9 ♂ 3 ♀ Amazons (Ega. Tonantins. Nauta. Tefte. Pebas). 2 ♂ Peru (Loreto. Moyabamba).

3 (1a). F without an outer hyaline spot in cell. ♀ like ♂. ♂ F 27 mm.

**praecia**. 5 sub-species.

(a). Upf in addition to the 3 large central hyaline spots, there is usually a lower spot in space 1b, a spot beyond the band in space 3, and 4 or 5 apical spots. Uph and unh with 2 blue bands. Above, thorax and basal striping greenish yellow.

Sub-sp. **praecia** Hewitson 1857: ♂ Santarem: type B.M.: figured. Fig Seitz (no spot in space 1b upf, but present in type).

Synonym. *herrichii* Herrich-Schäffer 1869: ♂ ? loc. Fig Seitz.

B.M. 3 ♂ 3 ♀ Lower Amazons (Pará. Santarem). Genitalia fig by Williams & Bell 1933.

(b). Upf only the central band: rarely an apical dot in ♂, 4 in ♀. Uph and unh blue bands reduced, unh outer band not above vein 6. Above thorax and bases tawny.

Sub-sp. **rufibasis** Mabilie 1910: ♂ Cayenne. Fig Mab & Boulet 1912 and in Seitz.

B.M. 1 ♂ Trinidad. 4 ♂ 1 ♀ Br Guiana. 5 ♂ 3 ♀ Fr Guiana.

(c). Upf central spots as usual and at apex several blue spots, which in ♀ are continued parallel to the termen, meeting a double blue bar under the discal band, which bar is more or less visible in the ♂. Uph and unh the inner blue band absent. Above thorax and basal areas red.

Sub-sp. **plutia** Hewitson 1857: ♂ Villa Nova, Amazons: type B.M.: figured. Fig in Seitz. Genitalia fig Williams & Bell 1933.

#### B.4. PHANUS

Synonym. *bivittatus* Mabilie & Boulet 1912: 1 ♂ Amazons: type B.M.

B.M. 1 ♂ Ecuador (Rio Napo). 4 ♂ 1 ♀ Upper Amazons. (d). Above unmarked except for red hairs on thorax and bases. Unf white central band as usual. Unh unmarked except for some red scaling at the base as in *corytus corba*, of which it may be an extreme form, but the conspicuously white-ringed abdomen indicates an alliance with *praecia*.

Sub-sp. *erebus* Plötz 1879: ♂ Bahia. Fig Seitz.

B.M. None.

(e). Near *rufibasis*. Upf blue iridescence more conspicuous: clothing of thorax and wing bases dark red and reduced. Upf submarginal blue markings conspicuous, also two streaks under the hyaline band. Unf with apical blue spots and a large suffused pale blue area in space 1b, in continuation of the discal hyaline band, which is much wider at the costa. Unh the outer blue band continuous from space 1c to space 6: inner band absent at base of space 2: a blue spot at end of cell.

Sub-sp. *luna* nov: ♂ Buenavista, E. Bolivia: type B.M.

B.M. 2 ♂ type loc.

**B.4. PHANUS** Hübner 1819: type *vitreus* Stoll: sole species included by author.

A genus with 4 very similar species.

1a (3a). F hyaline streak in space 2 divided beyond its middle: the upper portion short and bluntly rounded, not reaching the hyaline spot in space 3, which is not divided but outwardly excavate: lower cell streak divided.

1 (2). H cell streak and spot end cell conjoined. Markings broad. ♂ F 22 mm.

**vitreus** Stoll 1781: Surinam: figured. Fig Seitz: genitalia fig G & S.: Hayward 1948, ♂ and genitalia.

Synonyms. *momus* Fabricius 1787: Fr Guiana.

*godmani* Williams & Bell 1931: ♂ Nicaragua: genitalia figured.

B.M. 2 ♂ 3 ♀ Mexico. 5 ♂ 1 ♀ Guatemala. 3 ♂ 1 ♀ Honduras. 3 ♂ 1 ♀ Nicaragua. 1 ♂ 5 ♀ Costa Rica. 12 ♂ 9 ♀ Panama. 7 ♂ 10 ♀ Colombia. 5 ♂ 3 ♀ Venezuela. 3 ♂ 4 ♀

Trinidad. 4 ♂ 8 ♀ Br Guiana. 4 ♂ 7 ♀ Fr Guiana.  
 4 ♂ 5 ♀ Surinam. 4 ♂ 9 ♀ Ecuador. 6 ♂ 5 ♀ Peru. 5 ♂ 7 ♀  
 Bolivia. 24 ♂ 27 ♀ Amazons. 24 ♂ 23 ♀ Brazil. 2 ♀ Para-  
 guay.

- 2 (1). H cell streak and spot end cell wide apart: the spot in space 6 over the spot end cell is very small and situated over and inside the outer edge of the spot end cell: in the other 3 species the spot in space 6 is much larger and more or less overlaps the edges of the spot end cell and the discal spot beyond. Larger, ♂ F 24 mm., darker due to markings being smaller. An apparently isolated species with considerably different genitalia, marked on F like *vitreus* and on H like *obscurior*.

**rilma** nov: ♂ Guerrero, Mexico: O. T. Barron: type B.M. B.M. 3 ♂ 1 ♀ type loc.

- 3a (1a). F hyaline streak in space 2 divided before its middle into 2 long narrow streaks. ♂ F 24 mm.

3 (4). F upper streak in space 2 shorter than the lower streak and not overlapping the spot in space 3, which is U-shaped: spots in space 1b widely separated. H cell streak and spot end cell wide apart. A dark species with narrow markings.

**obscurior** Kaye 1924: ♂ Trinidad.

B.M. 4 ♂ Nicaragua. 3 ♂ 4 ♀ Costa Rica. 3 ♂ Panama. 3 ♂ 3 ♀ Venezuela. 1 ♂ Br Guiana. 1 ♂ 1 ♀ Surinam. 18 ♂ 10 ♀ Trinidad. 1 ♂ Peru (Pebas). 16 ♂ 10 ♀ Brazil (Up Amazons. Parana. Rio. Espirito Santo).

- 4 (3). F upper streak in space 2 as long as the lower streak and completely overlapping the spot in space 3, which is V-shaped: lower streak in cell undivided: spots in space 1b overlapping. H cell streak and spot end cell usually united along their upper edges. Markings broad.

**marshallii** Kirby 1880: ♂ Trinidad: type Dublin Museum. Fig Waterhouse 1882 (Aid: pl 37): Williams & Bell 1931 with genitalia fig.

B.M. 3 ♀ Mexico. 2 ♀ Guatemala. 2 ♂ 2 ♀ Honduras. 1 ♂ 2 ♀ Costa Rica. 1 ♂ 1 ♀ Panama. 11 ♂ 5 ♀ Venezuela.

## B.5. UDRANOMIA

3 ♂ 12 ♀ Br Guiana. 4 ♂ 5 ♀ Fr Guiana. 2 ♂ 1 ♀ Surinam.  
21 ♂ 8 ♀ Trinidad. 11 ♂ 13 ♀ Brazil (Lower Amazons.  
Pernambuco. Matto Grosso. Espirito Santo). 1 ♂ Ecua-  
dor (Paramba). 3 ♂ 7 ♀ Bolivia (Sara, Santa Cruz de la  
Sierra).

**B.5. UDRANOMIA** Butler 1870: type *orcinus* Felder: type  
fixed by author.

Synonym. *Hydraenomia* Butler 1870: correction of  
*Udranomia* made 2 months later, but, as derivation was not  
hinted at in the original description, the change is invalid.

1a (4). H cell much longer than  $\frac{1}{2}$  wing. Upf a single large  
spot across cell before its middle. ♂ upf with costal fold.  
1 (2a). Upf outer spot in space 2 broken into 2 spots,  
which may inwardly be narrowly conjoined: upper part  
of central cell spot often joined to the outer spot. Unh  
no small detached pale spot mid cell in centre of the dark  
central band: veins centrally whitened. ♂ F  $13\frac{1}{2}$  mm.

**orcinus** Felder 1867: ♂ Bahia: figured: type B.M. Fig  
Seitz ♂: G & S genitalia.

B.M. 1 ♀ Guatemala. 1 ♀ Panama. 2 ♀ Fr Guiana. 1 ♂  
Peru (Tarapote). 5 ♂ 9 ♀ Brazil (Pará. Itaituba. Ega.  
Rio Grande. Minas Geraes. Matto Grosso). 1 ♀ Bolivia.

2a (1). Upf outer spot in space 2 as large as the inner spot  
and unbroken: inner and outer cell spots separate.

2 (3). Unh with a small detached pale spot mid cell in  
centre of the dark central band: veins not white. ♂ F  
15 mm.

**kikkawai** Weeks 1906: ♂ Venezuela. Fig Weeks 1911.

B.M. 1 ♀ Mexico. 2 ♀ Guatemala. 2 ♀ Honduras. 1 ♂ 1 ♀  
Panama. 2 ♂ 11 ♀ Br Guiana. 2 ♀ Fr Guiana. 16 ♂  
19 ♀ Brazil (Ega. Rio Tapajos. Villa Nova. Matto Grosso).

3 (2). Unh no pale spot mid cell in centre of the dark central  
band: veins in middle yellow in ♂. ♂ F  $16\frac{1}{2}$  mm. Upf  
spot in space 1b minute and an iridescent green streak  
running under vein 2. Head and thorax dark iridescent  
green. Palpi at side with a dark central line. Unh central



pale band does not extend to dorsum, ends at vein 2 and there is a large detached spot beyond against vein 1b: submarginal irregular band absent above vein 2: this band in *orcinus* is continuous throughout, in *kikkawai* complete but discontinuous.

**eurus** Mabilbe & Boullet 1919: ♂ Venezuela.

B.M. 1 ♂ Amazons (St Paulo d'Olivencia). 1 ♀ Venezuela (Sierra Merida).

**4** (1a). H cell =  $\frac{1}{2}$  wing. Uph 2 conjoined hyaline spots before mid cell. Above, reddish brown, darkening outwardly. All hyaline markings very small arranged much as in *orcinus*. ♂ upf no costal fold. ♂ F 12 mm. Apex F not produced and cell < dorsum. Unh frosted over with white scaling. ♀ uph hyaline spots absent.

**spitzii** Hayward 1942: ♂ Matto Grosso: genitalia figured.

B.M. 1 ♂ Lower Amazons. 2 ♂ Ceara. 1 ♀ Goyaz. 10 ♂ 3 ♀ Matto Grosso. 1 ♂ São Paulo.

**B.6. DREPHALYS** Watson 1893: type *helixus* Hewitson: fixed by author.

Synonym. *Paradros* Watson 1893: type *phoenice* Hewitson: fixed by author. Typically these 2 genera appear very different, but they are connected by intermediate species and the genitalia conform to a general pattern.

**1a** (6a). Uph with a macular central and a subternal band of yellow spots: uppermost spot, in space 6, detached.

1b (5). Unh cell traversed by a white band.

1c (4). This band extends above the cell.

1 (2a). Unh ground colour uniform purple brown. ♂ with costal fold. H elongate at tornus. ♂ F 22 mm.

**helixus** 2 sub-species.

(a). Unh white band ends at vein 7.

Sub-sp. **helixus** Hewitson 1877: ♂: ? loc: type B.M. Fig G & S, ♂ and genitalia: Seitz.

B.M. 6 ♂ Panama.

(b). Unh white band reaches costa.

Sub-sp. **heraclides** Bell 1942: ♂ Peru: genitalia figured.

B.M. None.

B.6. DREPHALYS

**2a** (1). Unh basal area bright yellow.

2 (3). Unh white band reaches vein 8 well before its end.

♂ F 24 mm.: no costal fold.

**phoenicoides** Mabilbe & Boulet 1919: ♂ Brazil.

B.M. 2 ♂ 2 ♀ Br Guiana. 1 ♀ Fr Guiana. 1 ♂ Pará.  
1 ♀ Brazil.

**3** (2). Unh band very broad, 10 mm., reaching apex above end of veins. ♂ F 25 mm.: with a costal fold upf.

**phoenice** Hewitson 1867: ♀ Amazons: type B.M. Fig Hewitson 1873: Seitz (badly).

B.M. 1 ♀ Br Guiana. 3 ♂ Fr Guiana. 3 ♂ 7 ♀ Amazons (Pará. Ega).

**4** (1c). Unh band not extending above cell, reaching vein 1b below cell: a conspicuous black subternal spot crossed by a white band: base usually yellow. ♂ F 22 mm.: a narrow costal fold upf.

**dumeril** Latreille 1824: ♂ ? loc: type Paris Mus. Fig Seitz.

Synonym. *formosus* Felder 1867: ♀ Bahia: type B.M.: figured. Fig G & S, ♂ and genitalia: Seitz (badly).

B.M. 6 ♂ 1 ♀ Panama. 1 ♀ Venezuela. 1 ♀ Br Guiana. 1 ♂ Surinam. 1 ♂ Fr Guiana. 1 ♂ Ecuador (La Chima). 4 ♂ 3 ♀ Brazil (Bahia. Maranh. Joinville).

**5** (1b). Unh no white band across cell: a more or less conspicuous yellow spot beyond end cell and a black subternal spot crossed by a yellow band: wing glazed purple brown. ♂ with costal fold upf.

**oriander**. 2 sub-species.

(a). ♂ F 25 mm. Above darker, basal clothing dull olivaceous. Upf hyaline markings larger, cell spot and spot at base of space 2 overlap: non-hyaline markings on both wings smaller and duller. Unf pale spot in space 1b absent. Unh all pale markings faint. Clasp differs slightly.

Sub-sp. **oria** nov: ♂ Honduras: type B.M.

B.M. 2 ♂ 1 ♀ Honduras.

(b). ♂ F 24 mm. Above, much brighter, basal clothing bright orange, also the larger non-hyaline markings: hyaline markings smaller and upf the spots in cell and

space 2 do not overlap. Unf conspicuous yellow spot in space 1b and unh spot end cell prominent.

Sub-sp. **oriander** Hewitson 1867: ♂ Amazons: type B.M.

Synonym. *plötzi* Mabilie & Boullet: ♀ Fr Guiana.

B.M. 1 ♂ "Honduras". 1 ♀ Br Guiana. 1 ♂ Surinam.

1 ♂ Peru (Rio Ucayali). 12 ♂ 21 ♀ Brazil (Pará. Maranh.).

**6a** (1a). Uph without such markings.

6 (7a). Uph entirely tawny except for the narrow dark border. Upf base to cell spot tawny. Unh basal half yellow, outer half purple brown, spot end cell conspicuous. ♂ F 20 mm., upf with costal fold.

**talboti** Le Cerf 1922: ♂ Fr Guiana: type B.M.

B.M. 2 ♂ Fr Guiana. 2 ♂ Surinam. 1 ♂ Amazons (Tapajos).

**7a** (6). Uph dark brown, with or without markings.

7 (8a). Unh unmarked except for a yellow hyaline spot about end cell: the basal half yellow, outer half purple brown. Uph plain, only with the spot at end cell. F 23 mm.

**atinas** Mabilie 1888: ♂ ? loc: figured. Genitalia fig Williams and Bell 1934, who record 2 ♂ from Peruvian Amazonas. B.M. None.

**8a** (7). Unh with more extensive pale markings.

8b (11a). Unh the central spot not extending above the cell.

8c (10). Unh the central spot extending as a band to vein 1b.

8 (9). Unh basal half of wing yellow, outwardly purple brown: pale areas as above: termen conspicuously dark brown. Above as *eous* but bases and non-hyaline markings much yellower: uph central band continued under vein 6 as in *olvina* and the subternal band extended into space 2, as in *phoenice*. Unf costa bright ochreous to middle and dorsum broadly from base to outer edge of the spot in space 2: apex broadly purple brown. ♂ F 18 mm.: no costal fold. Palpi pale yellow.

B.6. DREPHALYS

**opifex** nov: ♂ Berg-en-Daal, Dutch Guiana: type B.M.  
B.M. Only the type.

9 (8). Unh purple brown, costa broadly white to middle, not tapered: central band as above, but continued to vein 1b and dorsum whitish beyond band: subternal white area as above: tornus and most of spaces 2 and 3 beyond the band are very dark brown. Above as *eous* but on uph the central band is prolonged towards the termen under vein 6. Unf costa and apex broadly purple brown, base costa obscure yellowish, small dark areas in spaces 4 and 5 below the apical spots: white markings as in *eous*: ♀ F 17 mm. Palpi and pectus white.

**olvina** nov: ♀ Carimang River, Br Guiana: type B.M.  
B.M. Only the type.

10 (8c). Unh central white spot not extending beyond cell, the detached spot in space 1c is followed by a large subternal white spot over the darkened tornus. Above as *eous* but uph the central band is confined to the cell and the basal quarter of spaces 4 and 5. Unf as *eous*. Unh dark ferruginous brown, costa broadly white tapering out at apex. Palpi and pectus whitish. Cilia brown, white in space 1b on F and spaces 2 to 4 on H. ♂ F 17 mm.: no costal fold upf.

**olva** nov: ♂ Isle Marajo, Pará: type B.M.  
B.M. 1 ♂ 1 ♀ type loc.

11a (8b). Unh the central spot extending as a band on either side of the cell.

11 (12a). Unh and uph with a conspicuous subternal white spot. Above, non-hyaline markings yellow in ♂, white in ♀. ♂ F 17 mm.: with costal fold upf.

**eous** Hewitson 1867: ♀ Pará: type B.M. Fig Hewitson 1873 and in Seitz.

B.M. 1 ♂ Fr Guiana. 4 ♂ 6 ♀ Amazons (Pará).

12a (11). UpH no subternal white spot.

12 (13). Unh basal three-fifths white, absorbing the band: outer part chocolate. UpH central white band parallel to



termen, running from vein 7 to dorsum. ♂ F 18 mm.: ♂ with costal fold.

**alcmon** Cramer 1779: Surinam: pl 261D,E. Fig Seitz.

B.M. 1 ♀ "Honduras". 1 ♂ 4 ♀ Br Guiana. 2 ♂ 2 ♀ Fr Guiana. 1 ♂ 1 ♀ Surinam. 5 ♂ 6 ♀ Amazons (Pará. Ega).

**13** (12). Unh base yellow up to central band. Upf spotting abnormal: outer spot in cell under origin of vein 10 instead of vein 9 as usual: inner cell spot small, against upper edge in ♂, absent in ♀: ♀ has a dot in space 4 and the other spots are larger. Uph unmarked in ♂: ♀ with a short central white band from middle of space 1c to base of space 6. Unf costa from base to outer cell spot yellow: in ♀ the cell spot is joined to the yellow area. Unh central silver band  $1\frac{1}{2}$  mm. wide from vein 1b to vein 8: in ♀ the band is continued to the pale dorsal area, which extends to the termen: outwardly broadly chocolate, bearing centrally (♂ only) a narrow irregular post-discal line of bluish-white scales from vein 1b to vein 7. Palpi below white: thorax and abdomen yellow. ♂ F 18 mm.: no costal fold: H prolonged at tornus.

**hypargus** Mabilie 1891: ♀ Amazons: M.S. fig of type in B.M.

B.M. 1 ♀ Br Guiana. 1 ♀ Fr Guiana. 1 ♂ 1 ♀ Amazons (Manaos and Obidos).

**B.7. AUGIADES** Hübner 1819: type *criniscus* Cramer: fixed by Butler 1870.

Inwardly ferruginous, outwardly dark brown, with or without small hyaline spots upf.

**1** (2). Upf usually fully spotted, but variable and, particularly in N. Brazil, the spots tend to become obsolete: but in all specimens the spots in cell and at base of space 2 are traceable. Unh always with a broad central and a narrower post-discal orange band. ♂ F 23 mm.

**criniscus** Cramer 1780: Surinam: pl 300 GH. Fig in Seitz.

B.M. 5 ♂ 2 ♀ Costa Rica. 2 ♂ Colombia. 18 ♂ 13 ♀ Venezuela. 1 ♂ Trinidad. 17 ♂ 13 ♀ Br Guiana. 3 ♂ 9 ♀ Surinam. 12 ♂ 12 ♀ Fr Guiana. 3 ♂ 2 ♀ Peru (Lobitas).

## B.8. HYALOTHYRUS

Yahuas. Rio Maranon. Amazonas). 2 ♀ Bolivia. 55 ♂ 42 ♀ N. Brazil (Amazons. Bahia. Maranh. Pernambuco. Matto Grosso).

- 2 (1). Upf usually unspotted, but in *bicolor* the apical spots are sometimes present and in *epimethea* ♀ all the spots are rarely present as dots. Clasp of genitalia very different from that of *crinisus*.

### **epimethea.** 2 sub-species.

(a). Above, basal half F and most of H bright tawny, much as in *crinisus*. Unf with the central band of *crinisus* (from costa, through cell to base of space 2) more or less conspicuous. Unh the orange bands as in *crinisus*. ♂ F 23 mm.

Sub-sp. **bicolor** Mabilles & Boulet 1919: ♂ Santarem: type B.M. Resembles Seitz fig of *epimethea*, upperside.

B.M. 2 ♂ 1 ♀ Fr Guiana. 4 ♂ 2 ♀ N. Brazil (Santarem. Obidos. Matto Grosso. Pernambuco. Maranh). 3 ♂ E. Bolivia (Buenavista).

(b). Above, basal third reddish orange: uph uniform dull brownish. Unf unmarked. Unh the yellow bands obsolete. ♂ F 25 mm.

Sub-sp. **epimethea** Plötz 1883: Brazil. Resembles Seitz fig of *epimethea*, underside.

Synonym. *cydana* Schaus 1912: Petropolis.

B.M. 12 ♂ 14 ♀ S. Brazil (Rio. Espirito Santo. Thereopolis. Tijuco).

**B.8. HYALOTHYRUS** Mabilles 1878: type *nitocris* Cramer: fixed by Kirby 1880.

Synonyms. *Lignyostola* Mabilles 1903: type *pemphigargyra* Mabilles: sole species included.

*Mionectes* Mabilles 1903: type *infernalis* Möschler: sole species included.

*Plagiothyrsus* Mabilles & Boulet 1919: type *leucomelas* Mabilles: sole species included.

*Onzis* Lindsey 1925: to replace *Mionectes* preoccupied by Cabanis 1844.

The genitalia and structure indicate a close affinity between the 5 species: *neleus* is sexually dimorphic.

- 1 (2a). Unh orange yellow except for the dark brown apex.  
H tibiae with a single pair of spurs.

**infernalis.** 2 sub-species.

- (a). ♂ ♀ upf always with a lower spot in space 1b. Unh with a more or less developed tornal dark area. ♂ F 23 mm.

Sub-sp. **infernalis** Möschler 1876: Cayenne: figured. Fig Seitz.

Synonym. *hesychius* Möschler MS 1876: = *infernalis*.

B.M. 16 ♂ 6 ♀ Br Guiana. 2 ♀ Surinam. 13 ♂ 7 ♀ Fr Guiana. 6 ♂ 5 ♀ Amazons (Ega. Tapajos. Santarem).

- (b). ♂ upf no lower spot in space 1b. Unh ♂ ♀ no dark tornal area.

Sub-sp. **infa** nov: ♂ Florida, Upper Putumayo: type B.M.

B.M. 1 ♂ Ecuador (Rio Napo). 25 ♂ 25 ♀ Amazons (Iquitos. Upper Putumayo. Pebas. Ega. Teffe. St Paulo).

- 2a (1). Unh not yellow. H tibiae with 2 pairs of spurs.

- 2 (3a). Above, grey powdered: uph with a large central oval hyaline white spot. ♂ F 20 mm.

**leucomelas** Geyer 1832: ♀ S. America: fig 623-4. Fig Seitz.

B.M. 2 ♂ 2 ♀ Panama. 1 ♂ Peru. 31 ♂ 37 ♀ Brazil (Pará. Santarem. Obidos. Cameta. Rio Madeira).

- 3a (2). Above, no grey scaling: no hyaline spot uph.

- 3b (5). ♂ ♀ unh with a white area from base, which is always wider at the costa than at the dorsum, the whole of space 8 being white.

- 3 (4). Uph unmarked black. Unh white basal area occupying less than half the wing. ♂ F 18 mm.

**nitocris** Stoll 1782: Surinam: pl 393 F.G. Fig Seitz.

B.M. 12 ♂ 10 ♀ Fr Guiana. 4 ♂ 5 ♀ Surinam. 4 ♂ 1 ♀ Br Guiana.

- 4 (3). ♂ ♀ uph with a broad white central area. Unh two thirds of wing white. ♂ F 20 mm.

**mimicus** Mabile & Boulet 1919: ♀ Peru. Genitalia fig Williams & Bell 1934. Hayward 1948, ♂ and genitalia.

B.M. 2 ♂ Colombia (Villa Vicencio). 12 ♂ 9 ♀ Upper Amazons. 4 ♂ Venezuela.

B.9. PHAREAS

- 5 (3b). ♂ entirely very dark brown, unmarked above or below: palpi below orange. ♀ like *mimicus*: upf fully spotted: unh with a broad white central area reaching dorsum: unh mostly white, but the dark border curls over apically and at least enters end of space 8, usually running narrowly to the base: Palpi below white.

**neleus**. 3 sub-species.

- (a). ♀ dark border on H usually diminishing to a point tornally and not reaching tornus. ♂ F 23 mm.

Sub-sp. **pemphigargyra** Mabilie 1888: ♀ Chiriqui: type B.M. Fig G & S, ♀ as *neleus*, genitalia as *lacydus*: Seitz ♀, as *neleus* ♂.

Synonym. *niger* Röber 1927: ♂ Colombia.

B.M. 2 ♀ Honduras. 3 ♂ 4 ♀ Nicaragua. 3 ♂ 3 ♀ Panama. 3 ♂ 3 ♀ Colombia. 2 ♀ Venezuela. 2 ♂ Br Guiana. 1 ♂ Surinam. 1 ♂ 1 ♀ Amazons.

- (b). ♀ dark border even throughout (or slightly diminishing), reaching dorsum just above tornus. ♂ F 25 mm.

Sub-sp. **neleus** Linnaeus 1758: ♀ "Indiis". Fig Clerck Icones pl 45 as "*nileus* 187": ♀ fig Seitz as *neleus* ♀.

Synonyms. *priscus* Felder 1862: ♀ Brazil: type B.M. Fig Felder 1867.

*lacydus* Druce 1876: ♂ Ucayali, Peru: type B.M.

*aon* Godman MS 1907 = *lacydus*.

B.M. 3 ♂ 3 ♀ Fr Guiana. 7 ♂ 13 ♀ Peru (Rio Morena. Rio Pacaya. Ucayali. Chambireyacu. Amazonas). 13 ♂ 19 ♀ Amazons (Nauta. St Paulo. Tapajos. Ega). 1 ♀ W. Bolivia (Reyes).

- (c). ♀ large, 26 mm. Uph dark border very broad, 7 mm., and even. Unh the dark border ends one-third along costa, basal two-thirds being white.

Sub-sp. **neda** nov: ♀ Bolivia, Farinas La Paz: type B.M.

B.M. 1 ♂ 9 ♀ Bolivia (Farinas. Buenavista. Sara, Santa Cruz de la Sierra).

**B.9. PHAREAS** Westwood 1852: type *coeleste* Westwood: sole species included at time of publication of plate, which preceded the publication of the text (*fide* Hemming 1941). Synonym. *Grynopsis* Watson: type *coeleste* Westwood: fixed by author.



Single species. Above, dark shining blue with conspicuous white spots upf: the spot in space 1b is elongate basad along vein 1 in ♂, rounded in ♀. Unh orange with a broad dark border from costa to end of vein 3. Cilia white chequered. ♂ F 27 mm.

**coeleste** Westwood 1852: ♀ Pará: type B.M.: figured. Fig Seitz.

B.M. 3 ♂ 3 ♀ Colombia (Villa Vicencio). 8 ♂ 4 ♀ Br Guiana. 1 ♂ Surinam. 8 ♂ 5 ♀ Fr Guiana. 3 ♂ 1 ♀ Ecuador. 2 ♂ 8 ♀ Peru (Yahuamayo. Chambireyacu. Amazonas). 12 ♂ 17 ♀ Brazil (Pará. Santarem. Upper Putumayo). 3 ♂ 7 ♀ Bolivia (Sara, Santa Cruz de la Sierra).

**B.10. ENTHEUS** Hübner 1819: type *priassus* Linnaeus: sole species included was *peleus* Linnaeus, which is a synonym of *priassus*.

Synonym. *Peleus* Swainson 1832: type *peleus* Linnaeus: fixed by author.

The similarity of the females renders identification difficult: such characters as there are, have been dealt with fully. In this connection the ♀ genitalia are of assistance, having on either side of the ovipositor a spined process, not unlike a ♂ clasper.

1 (2a). ♂ upf all the markings hyaline white; basal third orange: discal band narrow, continuous, tapering from radius to middle of space 1b: apical band continuous: spot in space 3 midway between the bands: no lower spot in space 1b. Uph orange except for a narrow dark brown border, which continues along the costa to the base. ♀ upf marked as in ♂. ♂ ♀ with 2 pairs of spurs on H tibiae: no tibial hair pencil in ♂. ♂ F 18 mm.

**eumelus.** 2 sub-species.

(a). ♂ upf with a broad costal fold (*fide* Williams & Bell): uph with a splash of brown hairs in middle of disc. ♀ upf in addition to the usual, somewhat restricted, orange streak at base cell, there is also a narrow orange streak along the dorsum from base to beyond middle: uph the veins mid disc darkened, narrowly in Cramer's figure, broadly and conjoined in B.M. specimens, on the dark

orange ground: unf base pale orange, also all unh except for the dark border, which ends broadly mid costa.

Sub-sp. **eumelus** Cramer 1777: ♀ ? loc: fig 156E. Fig Seitz. Synonym. *mina* Williams & Bell 1931: ♂ Dutch Guiana: figured. The figure of the ♀ = *gentius* ♀.

B.M. 2 ♀ Br Guiana. 3 ♀ Fr Guiana.

(b). ♂ upf no costal fold: uph unmarked except for the dark border, which varies in width. ♀ upf no orange dorsal streak: uph white with a 2-mm. wide dark brown border from base along costa and termen to tornus: unf red basal streak as above and discal band continued to costa and broadly to tornus, whence a white streak runs along the dorsum towards the base: unh dark border runs to base costa.

Sub-sp. **ninyas** Druce 1912: ♂ Bolivia: type B.M.: figured.

B.M. 1 ♂ Colombia (Utica, Cundinamarca: border H broad). 2 ♂ Bolivia. 5 ♂ 5 ♀ Pará. 1 ♂ 1 ♀ Matto Grosso. 1 ♀ Goyaz.

2a (1). ♂ upf with yellow or red, mostly opaque, markings.

♂ ♀ H tibiae without the upper pair of spurs (may be vestigial in ♀). ♂, first segment of tarsus swollen and grooved on the outer edge to take a hair pencil, emanating from the upper end of the tibia.

2b (4a). ♂ above, basal half F and all except border H, yellow or orange. ♀ unf base cell red or yellow.

2 (3). ♂ above, yellow and black, discal band opaque; apical band hyaline, straight and continuous: no spot in space 3 (1 B.M. specimen has a narrow streak): costal vein darkened on basal yellow area. ♀ upf no spot in space 3, nor a lower spot in space 1b: discal and apical bands straight and continuous: uph white area oval, not reaching dorsum: unf red basal streak conspicuous. Abdomen above, dark brown, yellow at sides in ♂ and white in ♀. ♂ tibial pencil red-brown. ♂ F 21 mm.

**lemna** Butler 1870: ♂ ? loc: type B.M. Fig Butler 1874: Swainson 1832 as *gentius*: Seitz ♂ and ♀.

Synonyms. *berytus* Hewitson 1877: ♀ ? loc: type B.M. *annae* Plötz 1883: ♀ Pará: copy of MS fig in B.M.

*schmithi* Hoffman 1932: ♂ Santa Catharina.

B.M. 16 ♂ 8 ♀ S. Brazil (Rio. Espirito Santo).

- 3 (2). ♂ above orange and black, rhomboidal spot in space 3 upf: markings generally opaque except for upper part of apical band, but sometimes more of the markings are hyaline: very variable in respect of size, tone of orange colouring and width of dark border H. ♀ upf red basal streak conspicuous: discal and apical bands discontinuous generally: spot mid costa rarely present: lower spot in space 1b always present and usually as large as the upper spot. Uph central white area continued full width to dorsum. Unf base cell yellow, generally turning reddish outwardly. Abdomen yellow in ♂, white in ♀, when fresh. ♂ F 15-21 mm. ♂ genitalia asymmetric in respect of the uncus and the form of the clasp very variable. ♀ genitalia with processes at the side of the ovipositor furnished with long spines.

**gentius** Cramer 1779: ♂ Surinam: fig 179C. Fig Seitz ♂: fig by Swainson 1832 = *lemna*: ♀ fig Williams & Bell 1931 as *mina* ♀.

Synonyms. *concinna* Plötz 1883: ♂ Pará. Fig Seitz.

*osiris* Plötz MS 1883: = *concinna*.

*sirius* Mabilie 1897: ♀ Fr Guiana: type B.M.

*laticornis* Mabilie & Boulet 1919: ♂ Fr Guiana.

B.M. 1 ♀ Colombia. 27 ♂ 10 ♀ Fr Guiana. 5 ♂ 3 ♀ Br Guiana. 10 ♂ Surinam. 1 ♂ 2 ♀ Ecuador (Sarayacu). 7 ♂ 2 ♀ E. Peru (Amazones). 1 ♂ Bolivia. 34 ♂ 8 ♀ Lower Amazons. 5 ♂ 1 ♀ Maranhão. 17 ♂ Up Amazons. 2 ♂ 5 ♀ Rio Madeira.

- 4a (2b). ♂ above, black with red or yellow markings F, partially hyaline. ♀ unf base cell grey, but costa more or less yellow scaled. Abdomen black in ♂, brown in ♀.

4 (5). ♂ upf large spot in space 3 conjoined inwardly to the discal band: uph entirely black. ♀ upf the spot in space 3 rhomboidal and not nearer to the apical than to the discal band: no spot mid costa: ♀ genitalia with the side processes broad with short spines.

**priassus**. 3 sub-species.

(a). ♂ upf apical and discal bands not conjoined at costa: cell portion of discal band often hyaline: clothing of thorax, abdomen, below, and legs, including tibial tuft,



bright orange. ♀ upf lower spot in space 1b as large as the upper spot: uph brown with an oval white discal area, which does not extend dorsally beyond the middle of space 1c. ♂ F 20 mm.

Sub-sp. **priassus** Linnaeus 1758: ♂ "Indiis". Fig Seitz, ♂ correctly: ♀ lacks the lower spot in space 1b, which is nearly always present.

Synonyms. *talaus* Linnaeus 1763: ♀ Indiis: fig Clerck Icones 45/1. Fig Cramer pl 393C, a small dark specimen. *peleus* Linnaeus 1763: ♂ Indiis: fig Clerck Icones 45/5. Fig by Cramer pl 284F = *dius*.

*aeacus* Swainson 1832: ♂ S. America: fig pl 75/1.

*serenus* Plötz 1883: ♀ ? loc. Godman 1907 incorrectly = *eumelus*.

*cramerianus* Mabilie 1897: ♀ Guiana, for Cramer's fig of *talaus*. Fig in Seitz, ♂ = *telemus*, ♀ = *dius*.

B.M. 2 ♂ 3 ♀ Dutch Guiana. 8 ♂ 5 ♀ Br Guiana. 27 ♂ 25 ♀ Fr Guiana. 3 ♂ Trinidad.

(b). ♂ upf apical and discal bands often conjoined at costa: below, abdomen only dull ochreous, tibia tuft brown. ♀ upf as *priassus*: uph central white area extends at full width to dorsum, where it is equal to or wider than the dark border. ♂ F 21 mm. Genitalia of ♂ somewhat modified, process at back of uncus shorter and ends of clasps more rounded. ♂ F 20 mm.

Sub-sp. **telemus** Mabilie 1897: ♂ Brazil. Copy of Plötz MS fig in B.M. Fig Seitz as *cramerianus* ♂ (nec ♀). Genitalia fig Williams & Bell 1934.

B.M. 2 ♂ 2 ♀ Ecuador (Sarayacu). 13 ♂ 8 ♀ Peru (Chanchamayo. Chambireyacu. Chaquimayo. Cavallo Cochi. Ucayali. Yahuas). 30 ♂ 23 ♀ Amazons (Upper Putumayo to Pará). 1 ♂ 3 ♀ Maranhão. 1 ♂ Pernambuco. 1 ♀ Rio Madeira. 2 ♂ 1 ♀ Anna River.

(c). Larger ♂ F 22 mm. ♂ upf apical and discal bands apart: clothing below as *telemus*: genitalia as *priassus*. ♀ upf apical band more regular, not disrupted: lower spot in space 1b smaller than the upper spot: red basal streak more extensive: uph central white area quadrate, just crossing vein 1A but not reaching dorsum and on vein 1A narrower than the dark border to tornus.



Sub-sp. **pralina** nov: ♀ Espirito Santo: type B.M.

B.M. 23 ♂ 17 ♀ Brazil (Espirito Santo. Rio. San Salvador. "Brazil". "Amazons").

5 (4). ♂ upf spot in space 3 separate from the discal band. ♀ upf the spot in space 3 always rather nearer to the apical than to the discal band. ♂ genitalia similar to *priassus*: ♀ with the side processes narrow, with short spines. ♂ tibial tuft long, dense, tawny.

**matho**. 4 sub-species.

(a). ♂ F 24 mm. ♂ upf discal band yellow, partly hyaline, like the post-discal hyaline markings: sometimes with a reddish basal streak: apical band in a regular, unbroken line: spot in space 3 very narrow, parallel and very close to the apical band: uph dorsum broadly pale yellow. ♀ F 21 mm.: upf basal red streak long; spot mid costa faint or absent: lower spot in space 1b absent: apical band and spot in space 3 as in ♂: uph white area extends full width to the dorsum, where it is wider than the outer border.

Sub-sp. **matho** Godman & Salvin 1879: ♂ Guatemala: type B.M. Fig Godman & Salvin 1893 and Seitz, ♂ and ♀.

B.M. 1 ♂ Mexico. 1 ♂ Guatemala. 3 ♂ 2 ♀ Nicaragua. 8 ♂ 6 ♀ Costa Rica (1 ♀ = *dius*).

(b). ♂ F 24 mm. Upf discal band opaque red: no red basal streak: apical spots continuous, but more irregular: spot in space 3 rhomboidal: uph dorsum broadly white. ♀ F 21 mm.: upf red basal streak conspicuous: no spot mid costa: apical band disrupted at vein 6: spot in space 3 narrow: lower spot in space 1b as large as upper spot: uph white area more extensive than in any other species, extending to tornus.

Sub-sp. **latifascius** Hering & Hopp 1925: ♀ Colombia: figured.

Synonym. *quadratus* Bergman 1929: ♂ Colombia.

B.M. 1 ♂ Colombia (La Salva, San Juan, Choco Slopes, 4,600 ft.). 1 ♀ Bogotá. 1 ♀ Rio Condoto, Choco, Colombia (markings reduced). 1 ♀ Ecuador, Paramba.

(c). ♂ F 21 mm.: as *latifascius*. ♀ F 23 mm.: basal red streak conspicuous, upf: spot mid costa vestigial: lower

## B.II. CABIRUS

spot in space 1b absent or small: spot in space 3 narrow, rectangular: apical band irregular and may be disrupted: uph white area reaches dorsum, but somewhat constricted and narrower than the dark border: antennae above, white banded below club.

Sub-sp. **aequatorius** Mabilles & Boulet 1919: ♂ ? loc.

B.M. 2 ♂ 4 ♀ Ecuador (Balzapamba, Bolivar). 1 ♀ Ecuador (Sarayacu: more like *matho* ♀). 1 ♂ 6 ♀ Venezuela (El Mene de la Costa: smaller, ♀ upf with spot mid costa).

(d). ♂ F 21 mm, as *latifascius*, but uph entirely black and spot in space 3 a more oblique rhomboid. ♀ F 22 mm.: red basal streak conspicuous, also spot mid costa: spot in space 2 overlapping the cell spot: lower spot in space 1b rather smaller than the upper spot: apical band irregular and slightly disrupted: spot in space 3 a narrow rhomboid: uph white area as in *aequatorius*. Antennae plain, but in Panama and Colombia tend to be white banded below club.

Sub-sp. **dius** Mabilles 1897: ♀ "Brazil": type B.M. Fig Seitz, ♂ = *aequatorius*, ♀ as *dius* and *cramerianus*.

B.M. 3 ♂ 3 ♀ Panama. 5 ♂ 3 ♀ Colombia. 3 ♂ 6 ♀ Br Guiana. 5 ♂ 8 ♀ Fr Guiana. 1 ♂ Surinam. 3 ♂ Peru. 1 ♂ Bolivia.

## B.II. CABIRUS

Hübner 1819: type *julettus* Stoll: fixed by Scudder 1872.

Synonym. *Brontiades* Hübner 1819: type *procas* Cramer: fixed by Butler 1870.

Single species. Sexually dimorphic: ♂ metallic yellow with black borders: ♀ white with more or less broadly darkened veins: resemble moths of the genera *Seiropastnia*, *Hyalura* and *Myonia*. ♂ F 20 mm.

**procas**. 3 sub-species.

(a). ♂ upf dark dorsal area extends to vein 2. ♀ uph dark veins as broad or broader than the pale interspaces.

Sub-sp. **procas** Cramer 1777: ♂ Surinam: plate 179 D. Fig in Seitz = *junta*.

Synonym. *julettus* Stoll 1787: ♀ Surinam: plate 9/1. Fig Seitz.

B.M. 1 ♀ Br Guiana. 9 ♂ 1 ♀ Surinam. 15 ♂ 6 ♀ Fr Guiana. 12 ♂ 5 ♀ Lower Amazons (Pará. Santarem. Maranh).

(b). ♂ upf dark dorsal area not extending beyond the middle of space 1b. ♀ with the veins narrowly darkened, = or narrower than the interspaces.

Sub-sp. **junta** nov: ♀ Chanchamayo, Peru: type B.M. ♂ fig Seitz as *procas*. B.M. 10 ♂ 4 ♀ Peru (Chanchamayo. San Ramon, La Merced. Cuzco. Moyabamba). 5 ♂ Bolivia. 2 ♂ 1 ♀ Matto Grosso.

(c). ♂ as *junta*. ♀ uph immaculate white except for the dark border, veins not darkened.

Sub-sp. **purda** nov: ♀ Pebas, Amazons: type B.M.

B.M. 8 ♂ 2 ♀ Ecuador. 4 ♂ 3 ♀ Peru (Lower Ucayali. Yahuas. Loreto. Rio Maranon). 10 ♂ 1 ♀ Amazons (Pebas. Tonantins).

## Group C. URBANUS

### ANALYSIS OF GENERA

A group of the *Pyrginae* characterised by the long forewing cell and the tailed or lobed hindwing: the proximity of veins 6 and 7 of the forewing: the short, non-divergent, palpi: the free-resting position of the imago, with the wings erect or flat.

Antennae half as long as costa, shorter in *Proteides*, longer in *Ridens*: with a well-formed club and pointed apiculus: nudum 20 to 30 segments (34 in *Zestusa*). The differences in the form of the apiculus serve as an important aid to the classification of the genera.

Palpi short: second segment appressed to face, third not protruding in front of the second. *Zestusa* is abnormal with long porrect palpi.

Legs normal, except in *Heronia*, where the mid tibiae are spined.

Forewing cell long or very long: lower median veinlet strongly marked: veins 6 and 7 are approximate at their origins and in *Proteides* and *Epargyreus* they run close together, as in *Phocides* in the *Augiades* group.

Hindwing vein 5 faint or absent: end of cell constricted in *Proteides*: vein 1A short.

♂ usually with a costal fold: no brands or tibial tufts: alar tufts present in some species of *Polythrix* and in *Typhedanus*. In *Chrysoplectrum* the tibiae are furnished with a double row of spines as in *Tarsoctenus* in the *Augiades* group.

Facies generally with hyaline spots on the forewing: uph unmarked and unh with dark bands. *Proteides* and *Epargyreus* have a remarkable resemblance to the Hesperine genus *Aides*.

The group is confined to America.

1a (6a). F cell very long,  $\frac{3}{4}$  costa: upper end of cell generally nearer to the termen than to the origin of vein 11: lower



median veinlet ending well before origin of vein 4: apex truncate.

1b (5). F no spot in space 9: origin of vein 4 nearer to origin of vein 6 than to origin of vein 3: lower median veinlet ending nearer to the origin of vein 3 than to origin of vein 4.

1c (4). H lobed, not tailed.

1d (3). F with hyaline spot mid costa and in space 1b.

1 (2). Antennae short, not reaching to origin of vein 3: club angled, nudum 9/15. ♂ no costal fold.

**Proteides.** 2 species. U.S.A.—Argentine. W. Indies.

2 (1). Antennae reach to origin of vein 3: club hooked, nudum 6/16. ♂ with costal fold. Valva of clasp projecting inwards and bearing at end a tuft of long, thick hairs.

**Epargyreus.** 15 species. Canada—Argentine, W. Indies.

3 (1d). F without a hyaline spot mid costa or in space 1b. Antennae short, not reaching to origin of vein 3: club hooked, nudum 8/14. ♂ no costal fold.

**Polygonus.** 2 species. U.S.A.—Argentine. W. Indies.

4 (1c). H with long tail. Antennal club hooked, nudum 8/15. ♂ with a costal fold.

**Chioides.** 5 species. U.S.A.—Argentine. W. Indies.

5 (1b). F with contiguous apical spots placed before or over end cell in spaces 8 and 9, far apart from the spots in spaces 7 and 6. H lobed or tailed. Antennae hooked, nudum 5/18. ♂ with costal fold.

**Aguna.** 13 species. Mexico—Argentine. W. Indies.

6a (1a). F cell long,  $\frac{2}{3}$  costa: upper end not nearer termen than to origin of vein 11.

6b (10a. 13a). Antennae angled, bent beyond thickest part of club: length =  $\frac{1}{2}$  costa.

6 (7a). F lower median veinlet ends well before origin of vein 4. F generally with a spot in space 9 as in *Aguna*. H tailed or produced. Antennae  $\frac{1}{2}$  costa: nudum 11/10

GROUP C. URBANUS

to 18/13. ♂ no costal fold: uph with a hair tuft from near the base along space 1b.

**Typhedanus.** 8 species. Mexico—Argentina.

7a (6). F lower median veinlet ends at origin of vein 4: no spot in space 9.

7 (8a). H tailed. Antennal nudum 12/14. F spot in space 3 approximate to the spot in space 2. ♂ with costal fold and in some species with costal hair tufts uph, correlated to a speculum unf.

**Polythrux.** 13 species. Mexico—Argentina.

8a (7). H lobed, not tailed.

8 (9). Mid tibiae spined. Uph with a central hyaline spot. ♂ with costal fold. Antennal nudum 12/14.

**Heronia.** 1 species. Peru—Bolivia.

9 (8). Mid tibiae smooth. ♂ usually with a costal fold and hind tibiae with a double row of yellow spines. Antennal nudum 11/15.

**Chrysoptectrum.** 7 species. Mexico—Brazil.

10a (6b, 13a). Antennal club broadly arcuate. Upf generally with a hyaline spot in space 9.

10b (12). Antennae  $< \frac{1}{2}$  costa.

10 (11). Markings abnormal: F with a second spot in space 2: H with hyaline discal spots. H lobed. ♂ with costal fold. Nudum 34 segments. Palpi porrect, long and hairy.

**Zestusa.** 2 species. U.S.A.—Mexico.

11 (10). Markings normal. H tailed or lobed. ♂ no costal fold. Nudum 22 segments. Palpi normal.

**Codatractus.** 9 species. U.S.A.—Argentina.

12 (10b). Antennae long =  $\frac{1}{2}$  costa. H tailed or lobed. ♂ with costal fold. Nudum 19 segments.

**Ridens** nov: type *Eudamus ridens* Hewitson. 13 species. Mexico—S. Brazil.

**13a** (6b. 10a). Antennae hooked: nudum on apiculus longer than nudum on club.

**13b** (16a). F dorsum at end of vein 1 longer than the length of H at end of vein 6.

**13** (14. 15). H tailed: width of wing between ends of veins 1a and 2 =  $\frac{1}{2}$  width of costa. Antennae <  $\frac{1}{2}$  costa: nudum

5/15. ♂ usually with a costal fold.

**Urbanus**. 28 species. U.S.A.—Argentine. W. Indies.

**14** (13. 15). H generally without a tail: width of wing between ends of vein 1a and 2 much more than  $\frac{1}{2}$  width of costa. Antennae =  $\frac{1}{2}$  costa: nudum 4/21. ♂ usually with costal fold.

**Astraptus**. 34 species. Mexico—Argentine. W. Indies.

**15** (13. 14). H without a tail: typically costa narrow, not wider than width of wing between ends of veins 1a and 2. Antennae >  $\frac{1}{2}$  costa: nudum 3/21. ♂ costal fold narrow or absent.

**Calliades**. 2 species. Br Guiana—Amazons and Bolivia.

**16a** (13b). F dorsum at end of vein 1 = or < the length of H at end of vein 6. H not tailed. Antennae generally =  $\frac{1}{2}$  costa in ♂; shorter in ♀.

**16b** (19a). H produced at tornus, so that vein 1a is longer than vein 8.

**16** (17a). H apex evenly rounded and termen convex. F with a continuous hyaline band from costa to dorsum. Nudum 4/19. ♂ no costal fold.

**Autochton**. 13 species. U.S.A.—Argentine.

**17a** (16). H apex angled at end of vein 8.

**17** (18). H termen straight. Upf unmarked or with separated hyaline spots. Nudum 3/18. ♂ with or without a costal fold.

**Achalarus**. 6 species. U.S.A.—Colombia.

**18** (17). H termen strongly convex. Antennae >  $\frac{1}{2}$  costa: nudum 9/17. ♂ with a costal fold. F with a central band of large conjoined hyaline spots.

**Venada** nov: type *Telegonus advena* Mabilie. 1 species. Nicaragua—Peru.

C.1. PROTEIDES

**19a** (16b). H not, or only slightly, produced at tornus: veins 1a and 8 about equal. Upf with small separated hyaline spots.

19 (20). H termen evenly convex. ♂ with or without a costal fold. Nudum 3/19.

**Thorybes.** 6 species. Canada—Panama.

**20** (19). H termen more or less angled at end of vein 4. ♂ with or without a costal fold. Nudum 1/18.

**Cabares.** 3 species. Mexico—Argentina. W. Indies.

Thirteen species have been removed from the overloaded genus *Urbanus* to *Polythrix* and 6 to *Typhedanus*. The form of the genitalia and of the antennal club justify the rearrangement, which has been confirmed by the reports on the early stages made by the late Rev. A. Miles Moss (1949).

A new genus, *Ridens*, has been created for 13 species hitherto included in *Astraptes*, also an overloaded genus. The justification for this step lies in the form of the antennal club and the facies: the genitalia do not help, as from *Ridens* to the end of the group they do not change in form.

Another new genus, *Venada*, has been created for a species that it has been found impossible to include in any existing genus.

On the key character of the palpi, *Zestusa* should fall in Group E, but the antennal form, wing-shape and general appearance seem to indicate Group C as its proper place.

*Hyster* has usually been placed next *asander* in the genus *Aguna*, but structurally it is very different. It has been moved to *Codatractus*, where it is better placed, though not a perfect fit.

## ANALYSIS OF SPECIES

**C.1. PROTEIDES** Hübner 1819: type *mercurius* Fabricius: fixed by Butler 1870.

Synonym. *Dicranaspis* Mabilie 1878: type *mercurius* Fabricius: sole species included was *idas* Cramer, which is a synonym of *mercurius*.



Antennae short, not reaching as far as origin of vein 3 F. Apiculus more angled and shorter: nudum 9/15. No costal fold. Uncus arms connivent, gnathos undivided: clasp without any extension of the valva or the provision of specialised hairs as in *Epargyreus*.

I (2). Above, dark brown with orange basal suffusion. Unh with a broad diffused pale central area. Abdomen white ringed at each segment. ♂ F 30 mm.

**mercurius.** 7 sub-species.

(a). Upf fully spotted. Unh central area and termen white.

Sub-sp. **mercurius** Fabricius 1787: French Guiana. Fig Seitz: genitalia by G & S: both as *idas*: Hayward 1948. Synonym. *idas* Cramer 1779: Surinam: figured. A homonym of *Papilio idas* Linnaeus 1758.

B.M. 13 ♂ 3 ♀ Mexico. 7 ♂ 1 ♀ Guatemala. 5 ♂ 1 ♀ Nicaragua. 11 ♂ 1 ♀ Honduras. 3 ♂ 5 ♀ Costa Rica. 5 ♂ 1 ♀ Panama. 12 ♂ 2 ♀ Colombia. 19 ♂ 4 ♀ Venezuela. 1 ♂ 2 ♀ Trinidad. 1 ♂ Tobago. 4 ♂ Br Guiana. 4 ♂ Ecuador. 13 ♂ 3 ♀ Peru. 8 ♂ 2 ♀ Bolivia. 7 ♂ 7 ♀ Pará. 3 ♂ 1 ♀ Rio Madeira. 5 ♂ 1 ♀ Minas Geraes. 1 ♂ Manicore. 8 ♂ Goyaz. 4 ♂ 4 ♀ Matto Grosso. 21 ♂ 4 ♀ S. Brazil. 5 ♂ 3 ♀ Paraguay. 2 ♂ Argentine.

(b). Upf central spots absent. Unh as *mercurius*.

Sub-sp. **sanantonio** Lucas 1857: Cuba. Fig Seitz.

B.M. 15 ♂ 15 ♀ Cuba.

(c). Upf spots reduced. Unh pale areas scaled violet grey.

Sub-sp. **jamaicensis** Skinner 1920: ♂ Jamaica.

B.M. 5 ♂ 4 ♀ Jamaica.

(d). Upf fully spotted. Unh centrally white, margin brown.

Sub-sp. **sanchesii** Bell & Comstock 1948: ♂ Haiti.

B.M. 7 ♂ 7 ♀ Haiti.

(e). ♂ upf spots faint. Unh centrally dull ochreous brown, margin dark brown. Head orange.

Sub-sp. **pedro** DeWitz 1877: Porto Rico.

Synonym. *gundlachi* Plötz 1882: Porto Rico.

B.M. 3 ♂ 1 ♀ Porto Rico.

(f). Upf fully spotted. Unh centrally dull ochreous brown,

## C.2. EPARGYREUS

margin dark brown and dark markings reduced. Head dark orange.

Sub-sp. **angasi** Godman & Salvin 1886: ♀ Dominica: figured: type B.M.

B.M. 17 ♂ 15 ♀ Dominica. 2 ♂ 5 ♀ St Lucia. 1 ♀ Tobago. (g). Upf spots reduced. Unh as *angasi*.

Sub-sp. **vincenti** Bell & Comstock 1948: ♂ St Vincent.

B.M. 1 ♂ 6 ♀ St Vincent.

2 (1). Above brown without basal orange suffusion. Unh a sharply marked short central white band. Abdomen not striped.

**maysi** Lucas 1887: Cuba. Fig Seitz.

Synonym. *egens* Herrich-Schäffer 1862: Cuba.

B.M. 19 ♂ 17 ♀ Cuba.

**C.2. EPARGYREUS** Hübner 1819: type *clarus* Cramer: fixed by Scudder 1872 as *tityrus* Fabricius, which, being a homonym by Poda 1761, has been replaced by *clarus*.

Synonym. *Eridamus* Burmeister 1875: type *tmolis* Burmeister, sole species included.

A compact genus with a uniform type of genitalia. The first seven species are reasonably well defined on the basis of genitalia and facies. But the remaining species, allied to *exadeus*, present problems that can only be solved by breeding. In Paraguay there are definitely three species, which are readily separable on genitalia and facies, viz. *exadeus*, *clavicornis* and *socus*, and an attempt has been made to trace these species through to Mexico. In the case of *socus* this has proved difficult, particularly in the area assigned to the sub-species *sinus*, where in respect of both genitalia and facies there seems to be intergrading with other species, while in Colombia *socus* appears to have been replaced by a number of species whose affinities are doubtful.

1 (2a). Unh and apex unf with narrow dark lines: no white markings unh. ♂ 27 mm.

**enispe**. 2 sub-species.

(a). Below, border beyond the outer dark line grey, contrasting with the browner ground.

Sub-sp. **elta** nov: ♂ Bolivia, Tanampaya: 6,500–8,000 ft.:

Garlepp: type B.M.

B.M. 11 ♂ type loc.

(b). Below, uniform reddish brown.

Sub-sp. **enispe** Hewitson 1867: ♂ S. America: type B.M.

Fig Hewitson 1872: Seitz: genitalia by Williams 1927:

Hayward 1948, ♂ and genitalia.

Synonym. *rochus* Plötz 1882: Brazil.

B.M. 1 ♂ 1 ♀ Goyaz. 17 ♂ 3 ♀ Matto Grosso. 15 ♂ 2 ♀ S.

Brazil (Parana. Rio Grande). 1 ♂ Paraguay.

**2a** (1). Unh and apex unf without narrow dark lines.

2b (8a). Unh with a pale central band through end of cell. F spots large, orange yellow: spot in cell completely overlapped by the spot in space 2.

2c (7). Unh the pale central band continued to vein 8.

2d (6). Unh with a more or less conspicuous pale discal bar in space 1c but no irregular discal line above it.

2 (3a). Unh the pale band brown, showing faintly on the dark ferruginous ground. ♂ F 25 mm.

**zestos** Geyer 1832: ♀ "Surinam": figured. Fig Seitz.

Holland 1931: genitalia by Skinner & Williams 1922.

Synonyms. *oberon* Worthington 1881: ♂ Marco Is, Florida.

*arsaces* Mabilbe 1903: ♂ St Thomas Is: type B.M.

B.M. 6 ♂ 6 ♀ Florida. 1 ♀ Arizona. 3 ♂ 2 ♀ Honduras.

1 ♂ Martinique. 1 ♀ Guadeloupe. 1 ♂ 1 ♀ Tobago. 1 ♂ St

Kitts. 2 ♂ 2 ♀ Barbados. 1 ♂ 1 ♀ St Vincent. 13 ♂ 5 ♀

Dominica. 5 ♂ 5 ♀ Bahamas. 5 ♀ St Lucia. 3 ♂ St Thomas.

**3a** (2). Unh the central band silvery white.

3b (5). Unh upper half of central band much narrower than the lower half. ♂ F 25 mm.

3 (4). Unh chocolate. Genitalia, ♂ clasp tapered: ♀ ostium bursae very broad and serrate.

**clarus** Cramer 1775: "Surinam": figured.

Synonyms. *tityrus* Fabricius 1775: America: homonym by Poda 1761. Fig Smith & Abbott 1797: Scudder 1889

(♂, genitalia and venation): Wright 1906: Comstock 1927:

Seitz: genitalia by Skinner & Williams 1922 and Lindsey,

Bell & Williams 1931.

C.2. EPARGYREUS

*obliteratus* Scudder 1889: Boston.

*californica* (Edwards MS) Smith 1891 = *tityrus*.

*smythi* Williams 1927: S. Carolina.

*argentosus* Hayward 1933: ♂ "Tierra de Fuego": figured.  
Hayward 1947 states locality label wrong and = *clarus*.

*argenteola* Matsumura 1940: ♂ "Formosa": figured.

B.M. 12 ♂ 11 ♀ Canada. 154 ♂ 129 ♀ U.S.A. 3 ♂ 1 ♀  
Mexico (N. Sonora). 1 ♂ Honduras. 1 ♂ "Colombia".  
1 ♂ "Surinam". 1 ♂ "Brazil".

- 4 (3). Unh dark reddish brown. Genitalia, ♂ clasp with an abruptly oblique narrow ending: ♀ ostium bursae very slender, pointed, not serrate.

**antaeus** Hewitson 1867: ♀ no loc: type B.M. Fig Hewitson 1875: Seitz: genitalia by Williams 1927.

B.M. 16 ♂ 5 ♀ Jamaica.

- 5 (3b). Unh band of even width, 4 mm., but in space 7 it is divided by a brown bar equal in width to the white arm on either side. ♀ ostium bursae as in *antaeus*. ♀ F 35 mm.

**spanna** nov: ♀ Santo Domingo: 1855: Tweedie.

B.M. Only the type.

- 6 (2d). Unh with an irregular, macular, silver discal line, which is acutely angled outwards in spaces 4 and 5 half-way to the termen: the central band narrow, often macular and sometimes enlarged at its lower end. Unf end cell defined by a narrow whitish line, ending at the centre of the spot in space 3. F orange spots large, spot mid costa as wide as the cell spot: spot in space 2 completely overlapping the cell spot and the spot in space 1b.

**barisses**. 2 sub-species.

(a). Large, ♂ F 27 mm.

Sub-sp. **barisses** Hewitson 1874: ♂ Bolivia: type B.M. Fig Hewitson 1875: Seitz as *pseudexadeus*: genitalia by Williams 1927.

Synonym. *busiris* Mabille 1903: Peru.

B.M. 50 ♂ Peru (Marcapata. Carabaya). 37 ♂ 3 ♀ Bolivia (Tanampaya. Chulumani. La Paz. Corvoico. Apalobamba).



(b). Small, ♂ F 22 mm. F spots paler. Un silver markings reduced.

Sub-sp. **argentina** Mabilles 1903: Argentine.

Fig Hayward 1940, ♂ and genitalia as *barisses*.

Synonym. *argentea* Mabilles & Boullet 1912: ♂ Argentine.

B.M. 10 ♂ 4 ♀ Argentine (Tucuman).

**7** (2c). Unh the pale central band not continued above cell generally: the band usually silver, but may be pale brown, narrow and more or less macular: the irregular discal line usually faint and may be absent. Below marginal grey scaling conspicuous and unbroken: unf area between end cell and the apical spots pale brown. F spots orange and large as in *barisses*. ♂ F 25 mm.

**tmolis** Burmeister 1875: Buenos Ayres: larva and head figured: figured again in 1880 as *tmolus*. Fig Seitz: Williams 1927, ♂ ♀ and genitalia: Hayward 1948, plate 17/13. 14 ♂ ♀, but plate 17/21 is of *socus* and plate 4/12 are of the genitalia of *socus*.

Synonyms. *tellus* Plötz 1886: Argentine.

*tuolus* Mabilles 1903: Buenos Ayres.

B.M. 1 ♂ Paraguay. 27 ♂ 20 ♀ Argentine.

**8a** (2b). Unh without a central pale band: usually with a large silver central spot in space 1c to 3 and a small spot at the upper end of the cell: always a white discal bar in space 1c followed by a more or less well-developed irregular, macular, discal line, which may be angled outwards in spaces 4 and 5, but never to the same extent as in *barisses*. Below margin with grey scaling, but usually the scaling is absent in spaces 4 and 5 unf. F the spot in space 1b is detached from the spot in space 2, except in *socus pseudexadeus*.

**8b** (12a). Cuiller of clasp without a conspicuous spine on the ventral side midway between the tip of the cuiller and the tip of the style, whereon are the long hairs, characteristic of the genus.

**8** (9a). F spots orange to yellow, large: those in the cell and space 2 more or less overlapping.

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**socus.** 6 sub-species.

(a). Unh central spot very large, reaches base of space 3 and is typically conjoined at its centre to the bar at end of cell, showing an approach to *clarus*: the discal line and the marginal grey scaling feebly developed. ♂ F spot in cell half overlapped by the spot in space 2. ♂ F 28 mm.

Closely resembles *spina* and *exadeus* and flies with them.

Sub-sp. **cama** nov: ♂ Guerrero, Mexico; O. T. Barron: type B.M.

B.M. 16 ♂ 1 ♀ Mexico (Guerrero. Espinal. Orizaba. Jalapa. Miltas). 2 ♂ Guatemala.

(b). *socus* seems to be absent from the area south of Mexico to W. Venezuela. In E. Venezuela it reappears as a small form, ♂ F 26 mm. F spots pale yellow, large, spot in space 2 completely overlaps the cell spot. Unh central spot narrow, macular, tapering to the spot in space 3. Genitalia very variable, grading to *spina*.

Sub-sp. **chota** nov: ♂ Trinidad: type B.M.

B.M. 6 ♂ 1 ♀ Venezuela. 6 ♂ 5 ♀ Trinidad.

(c). From Ecuador to Bolivia there flies a large form, ♂ F 33 mm., resembling *socus*, but only half the cell spot is overlapped by the spot in space 2. Unh the central spot is as large as in *cama*, but does not reach the base of space 3: the marginal grey scaling and the irregular discal line are fairly well developed.

Sub-sp. **dicta** nov: ♂ Bolivia, Mapiri: 3,500 ft.: June 1895: Stuart: type B.M.

B.M. 1 ♂ Colombia. 21 ♂ 3 ♀ Ecuador (R. Pastaza. R. Numbala. Zamora. Loja). 52 ♂ 1 ♀ Peru (Charape. Perene. Chanchamayo. Moyabamba. Marcapata. Tarapote. Pebas. Carabaya. Palcazo. Inambari. Pozuzo. San Gaban. Chirimayo). 7 ♂ 1 ♀ Bolivia (Reyes. Cochabamba. Beni R. Buenavista. Mapiri. Salampioni).

(d). From Guiana to Matto Grosso the sub-specific situation is not clear. Typically smaller than *dicta*, ♂ F 29 mm. F like *dicta*: unh more like *chota*, the central spot narrow, but not macular. But some specimens resemble *chota*, others *dicta* and in Brazil they grade to *socus*. The genitalia vary towards *spina*.

Sub-sp. **sinus** nov: ♂ Pará: A. Miles Moss: type B.M.

B.M. 1 ♂ Br Guiana. 2 ♂ Surinam. 1 ♂ Ega. 1 ♀ Obidos. 3 ♂ Iquitos. 3 ♂ St Paulo d'Olivencia. 2 ♂ 3 ♀ Santarem. 7 ♂ 5 ♀ Pará. 3 ♂ Pernambuco. 5 ♀ Bahia. 2 ♂ Maranham. 8 ♂ Matto Grosso. 1 ♂ Goyaz.

(e). F the orange cell spot is completely overlapped by the spot in space 2. Unh the central spot is as in *dicta* and the irregular discal line is typically well developed. The genitalia are comparatively constant, but in facies there is often an approach to *pseudexadeus*. ♂ F 28 mm.

Sub-sp. **socus** Hübner 1825: ♂ ? loc: figured. The figures agree exactly with Parana specimens. Fig as *tmolis* (q.v.) by Hayward 1948.

B.M. 4 ♂ 1 ♀ Minas Geraes. 36 ♂ 20 ♀ S. Brazil (Parana. São Paulo. Rio. Santa Catharina. Novo Friburgo. Rio Grande). 10 ♂ 2 ♀ Paraguay. 9 ♂ 2 ♀ Argentine.

(f). Genitalia of *socus*, but in markings more closely resembling *barisses*. F spots very large: cell spot and spot in space 1b completely overlapped by the spot in space 2, but the costal spot is much smaller than the cell spot. Unf the end of the cell is defined by a narrow white line: the spot in space 3 is much nearer to the end of the cell than in *socus*, but not immediately below it as in *barisses*. Unh displays a great deal of individual variation and is often almost identical with *barisses*, but the discal line is never bent so far towards the termen in spaces 4 and 5. ♂ F 30 mm.

Sub-sp. **pseudexadeus** Westwood 1852: ♀ Minas Geraes: type B.M.: figured. The fig in Seitz is of *barisses*.

B.M. 1 ♀ Minas Geraes. 1 ♂ 3 ♀ Parana. 1 ♂ 1 ♀ no loc.

9a (8). F spots white, or very pale yellow, not overlapping. 9 (10a). F spot in space 2 generally with its centre under the origin of vein 3 and placed nearer to the cell spot than to the spot in space 1b. Unh the markings very variable: typically the central spot is macular. Palpi, below, pale brown.

**exadeus**. 2 sub-species.

(a). Smaller, ♂ F 27 mm., and paler above: wings seem less produced. F spots in cell and space 2 usually separate.



C.2. EPARGYREUS

Sub-sp. **cruza** nov: ♂ Mexico, Cordova, Vera Cruz:  
Russell: type B.M.

Fig as *exadeus* by Skinner 1911 and Holland 1931:  
genitalia by G & S 1893 as *exadeus*.

B.M. 31 ♂ 4 ♀ Mexico (Vera Cruz. Guerrero. Orizaba.  
Jalapa. Tabasco. Misantle. Ayutle. Jalesco. Yucatan.  
Tehuantepec. Cuernavaca). 6 ♂ 2 ♀ Guatemala. 1 ♂  
Nicaragua. 1 ♂ Salvador. 13 ♂ 2 ♀ Costa Rica. 8 ♂ 6 ♀  
Panama (transitional to *exadeus*).

(b). Generally larger, ♂ F 30 mm., and darker. F spots  
in cell and space 2 generally contiguous, though some-  
times (e.g. Pebas) the spots may be small and wide  
apart.

Sub-sp. **exadeus** Cramer 1779: ♀ Surinam: figured. Figs  
by Skinner 1911 and Holland 1931 = *cruza*: by Stau-  
dinger 1888 and Hayward 1948 = *clavicornis*: by Com-  
stock 1927 = *nutra* or *spinosa*. Genitalia figs by Williams  
1927, fig 1 = *exadeus*, fig 2 = *nutra*: by Lindsey, Bell &  
Williams 1931 = *exadeus*: by Skinner & Williams 1922  
= *exadeus*: by Hayward 1948 = *clavicornis*.

B.M. 28 ♂ 4 ♀ Colombia (Bogotá. Cauca. Valdivia. Santa  
Marta. Rio Meta). 2 ♂ Venezuela. 3 ♂ Trinidad. 8 ♂  
Ecuador (Loja. Paramba. Rio Napo. Cuenca). 13 ♂ 2 ♀  
Peru (Chanchamayo. Rio Colorado. Ucayali. Tarapote.  
Inambari. Yahuar Mayo. Amazonas; Chachapoyas). 6 ♂  
1 ♀ Bolivia (Santa Cruz. Buenavista). 5 ♂ Upper Amazons  
(Pebas. St Paulo d'Olivencia. Tonantins). 3 ♂ 3 ♀ Pará.  
1 ♂ 1 ♀ Bahia. 1 ♂ Matto Grosso. 1 ♂ Goyaz. 1 ♂ 1 ♀  
Minas Geraes. 5 ♂ 2 ♀ S. Brazil (Rio. Novo Friborgo.  
São Paulo). 2 ♂ 1 ♀ Paraguay. 1 ♂ Argentine.

10a (9). F spot in space 2 hardly larger than the other spots,  
placed centrally or nearer the spot in space 1b and its  
inner edge under the origin of vein 3. Unh central spot  
large, entire, discal line faint at its upper end.

10 (11), ♂ F 28 mm. Palpi below, dark chestnut. Unh  
the grey marginal scaling not reaching the discal line  
usually. Clasp peculiar; tip of the cuiller conspicuously  
necked at its commencement, ending in 2 or 3 sharp  
spines, below which it is smooth.



**nutra** nov: ♂ Colombia, Cauca: type B.M. Fig by Comstock 1927 as *exadeus* and genitalia fig by Williams 1927 (fig 2) of *exadeus* fit very well.

B.M. 30 ♂ Colombia (Bogotá. Cauca. Popoyan). 17 ♂ 3 ♀ Venezuela. 1 ♂ 1 ♀ "Minas Geraes".

**II** (10). ♂ F 32 mm. Tip of cuiller not necked, end rounded and inner face spined. Palpi below ochreous brown. Exactly like *clavicornis orizaba* except for the genitalia and the larger size of the central spot unh.

**aspina** nov: ♂ Colombia, Bogotá: Frère Apollinaire Marie: type B.M.

B.M. 4 ♂ Mexico. 4 ♂ Guatemala. 10 ♂ 4 ♀ Costa Rica. 1 ♂ Panama. 12 ♂ 3 ♀ Colombia (Bogotá. Cauca. Manizales. R. Dagua). 1 ♂ 1 ♀ Venezuela. 1 ♂ Ecuador (Angamarca).

**12a** (8b). Clasp with a long spine on the ventral side midway between the tips of the cuiller and the style. F spot in cell not overlapped by the spot in space 2.

12b (14a). Unh central spot large, its inner edge convex.

12 (13). Small, ♂ F 28 mm. F spots white, generally well separated, but may be dots, or contiguous.

**spina.** 2 sub-species.

(a). Unh not variegated as in *verruca*.

Sub-sp. **spina** nov: ♂ Colombia, Bogotá: Frère Apollinaire Marie: type B.M. Only separable by the clasp from *exadeus cruza*.

B.M. 4 ♂ 5 ♀ Mexico. 3 ♂ 2 ♀ Guatemala. 7 ♂ 1 ♀ Honduras. 1 ♀ Nicaragua. 3 ♀ Costa Rica. 8 ♂ 11 ♀ Panama. 61 ♂ 7 ♀ Colombia (Bogotá. Cauca). 4 ♂ 3 ♀ Venezuela. 5 ♂ Ecuador (Paramba. Loja. Zamora). 1 ♂ N. Peru (Charape). 1 ♂ Bolivia (Santa Cruz). 2 ♂ Pará. 1 ♂ 2 ♀ Minas Geraes.

(b). Unh the grey scaling before the termen very narrow, reaching only half-way to the irregular discal line, which is conspicuous, while the area between the discal line and the end of the cell is whitened.

Sub-sp. **verruca** nov: ♂ Verrugas, E. Peru, up to 6,000 ft.: A. Miles Moss: type B.M.

B.M. 2 ♂ 3 ♀ type loc. 1 ♂ Peru, Chorica.

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**13** (12). Large, ♂ F 34 mm. F spots deep yellow to orange, generally small and widely separated. Unh central spot very large, reaches to base of space 3: submarginal scaling violet grey, reaching to the discal line. Palpi below, dark chestnut brown.

**spinta** nov: ♂ Colombia, Bogotá: Frère Apollinaire Marie: type B.M.

B.M. 32 ♂ 1 ♀ Colombia (Cauca. Bogotá. Rio Hacha. Manizales). 1 ♂ Venezuela (Caracas). 4 ♂ Ecuador (Paramba). 9 ♂ N. Peru (Charape). 2 ♂ Peru, Amazonas, Chachapoyas. 1 ♀ Bolivia.

**14a** (12b). Unh inner edge of large central spot straight or concave. Palpi below, pale brown.

**14** (15). Unh small spot at upper end of cell widely separate from the large lower spot.

**clavicornis**. 3 sub-species.

(a). F spots white, small, wide apart. Unh markings much reduced: typically with only the discal bar in space 1c and the small spot at the upper end of the cell: more usually the usual lower central spot is represented by a narrow macular band. ♂ F 30 mm.

Sub-sp. **orizaba** Scudder 1872: Guatemala.

B.M. 2 ♂ 1 ♀ Mexico. 1 ♂ 1 ♀ Guatemala. 2 ♂ 2 ♀ Panama. 17 ♂ 5 ♀ Colombia (Cauca. Bogotá. Cundinamarca. Popoyan. R. Dagua). 2 ♂ 2 ♀ Venezuela. 4 ♂ 1 ♀ Ecuador (Loja. Lita. Paramba).

(b). ♂ F 28 mm. Markings more reduced. Typically, unh with only the small spot at end of cell: in one specimen even that is absent, as well as the cell spot F.

Sub-sp. **gaumeri** Godman & Salvin 1893: ♂ Ruatan Is, Honduras: type B.M.: figured.

B.M. 2 ♂ 1 ♀ type loc.

(c). F spots pale yellow, larger: usually separated, but the cell spot and the spot in space 2 may be contiguous. Unh markings more developed: the central spot usually consists of a narrow, undivided band. ♂ F 32 mm.

Sub-sp. **clavicornis** Herrich-Schäffer 1869: no loc. Fig as *exadeus* by Staudinger 1888 and Hayward 1948 plate 17/8 ♀ upperside, plate 4/10 genitalia.

### C.3. POLYGONUS

B.M. 7 ♂ Peru (La Merced. Perene. Tarapote. Ucayali). 6 ♂ 2 ♀ Amazons (Iquitos. Teffe. Obidos). 3 ♂ 1 ♀ Matto Grosso. 2 ♂ Goyaz. 1 ♀ Minas Geraes. 4 ♂ 3 ♀ S. Brazil (Novo Friborgo. São Paulo. Rio Grande). 15 ♂ Paraguay.

**15** (14). Unh abnormal: the spot at the end of the cell is conjoined to the inner angle of the large central spot at the base of space 3: the discal line is conjoined to the central markings and the white areas at and beyond the end of the cell are sparsely covered with brown scales: the sub-marginal grey scaling runs up to the discal line throughout its length. Upf the white spots typically minute and always wide apart. ♂ F 30 mm. The clasp is very long, narrow and straight.

**spinosa** nov: ♂ Guerrero, Mexico: O. T. Barron: type B.M.

3 ♂ 1 ♀ Mexico. 3 ♂ 1 ♀ Panama.

**C.3. POLYGONUS** Hübner 1825: type *leo* Gmelin: sole species included was *lividus* Hübner, a synonym of *leo*.

Synonyms. *Acolastus* Scudder 1872: type *leo* Gmelin: fixed by author as *savigny* Latreille, a sub-species of *leo*. *Acolastus* is a homonym by Gerst 1855.

*Nennius* Kirby 1902: created to replace *Polygonus*, which was wrongly assumed to be preoccupied by *Polygona*.

A genus with no near ally and containing 2 very similar species. It resembles *Proteides* in the form of the cell, but differs in having veins 6 and 7 divergent from their origins. H not tailed. F apical spots not placed as in *Asander*. ♂ without a costal fold. F no spot mid costa nor in space 1b.

**1** (2). Below glazed, no ochreous tinge: submarginal band faint and obsolete on the tornal half of the termen F and H. Unh sub-basal black spot in space 7 conspicuous: ground colour very variable.

**leo.** 4 sub-species.

(a). Unh glazed pale purple grey, markings conspicuous. Uph comparatively pale and dark markings show from below. ♂ F 25 mm.

### C.3. POLYGONUS

Sub-sp. **leo** Gmelin 1790: to replace *amyntas* Fabricius.

Synonyms. *amyntas* Fabricius 1775: America: homonym by Poda 1761. Fig Jones Icones: Fig in Seitz and Staudinger 1888 is of *manueli*.

*lividus* Hübner 1825: ? loc: figured. Fig in Seitz is of *manueli*. Genitalia fig by Bell & Comstock 1948 is of *savigny*. Fig by Hayward 1948, ♂ and genitalia=*manueli*. *arizonensis* Skinner 1911: ♂ Arizona: figured ♂ and ♀.

*histrion* Röber 1925: ♂ ? Panama.

*pallida* Röber 1925: Peru.

B.M. 3 ♂ 3 ♀ Florida. 11 ♂ 6 ♀ Mexico. 24 ♂ 10 ♀ Guatemala. 1 ♂ Salvador. 2 ♂ 2 ♀ Nicaragua. 9 ♂ 5 ♀ Venezuela. 1 ♀ Trinidad. 1 ♂ Surinam. 2 ♂ 2 ♀ Ecuador (Guayaquil. Arenillas. Hacienda Ave Maria). 1 ♂ Peru (Moyabamba). 4 ♂ 2 ♀ Bolivia. 4 ♂ 1 ♀ Amazons (Ega. Tapajos. Rio Madeira. Pará). 4 ♂ 4 ♀ Matto Grosso. 23 ♂ 9 ♀ S. Brazil. 4 ♂ 3 ♀ Paraguay. 18 ♂ 3 ♀ Argentine.

(b). Darker, above and below. Unh purple glazed. ♂ F 23 mm.

Sub-sp. **savigny** Latreille 1824: Antilles. Fig Comstock 1944 from Porto Rico as *lividus*.

B.M. 1 ♂ 2 ♀ Montserrat. 4 ♂ 3 ♀ St Thomas. 1 ♀ St Kitts. 3 ♂ 2 ♀ Bahamas (1 ♂ has upf spotless). 36 ♂ 12 ♀ Cuba.

(c). As *savigny* but above much duller brown. The purple iridescence absent or faint. ♂ F 23 mm.

Sub-sp. **hagar** nov: ♂ Jamaica: type B.M.

B.M. 30 ♂ 10 ♀ Jamaica.

(d). Larger, ♂ F 26 mm. Above, very dark. Below glazed greenish grey of a peculiar tone.

Sub-sp. **ishmael** nov: ♂ Haiti: type B.M.

B.M. 8 ♂ 11 ♀ Haiti.

2 (1). Below more or less ochreous with a strong purple gloss, but not glazed. Unh conspicuously ochreous between the dark bands in space 1c. Unf the submarginal macular ochreous bands extend to vein 1. Unh the sub-basal spot in space 7 small or absent usually. ♂ F 22 mm.

**manueli**. 2 sub-species.

(a). F spots large and quadrate.



Sub-sp. **manueli** Bell & Comstock 1948: ♂ New Bremen, Brazil: genitalia figured. Fig as *amyntas* in Seitz and genitalia by G & S: also by Staudinger 1888.

B.M. 1 ♂ Florida. 11 ♂ 7 ♀ Mexico. 4 ♀ Guatemala. 4 ♂ 1 ♀ Honduras. 2 ♂ 3 ♀ Nicaragua. 1 ♂ 1 ♀ Costa Rica. 1 ♂ 2 ♀ Panama. 1 ♂ 2 ♀ Colombia. 2 ♂ 2 ♀ Venezuela. 12 ♂ 7 ♀ Trinidad. 1 ♀ Br Guiana. 1 ♂ 1 ♀ Surinam. 1 ♀ Fr Guiana. 4 ♂ 4 ♀ Peru. 2 ♂ 2 ♀ Bolivia. 16 ♂ 17 ♀ Upper Amazons. 6 ♂ 6 ♀ Pará. 1 ♂ Bahia. 1 ♂ Goyaz. 2 ♂ 2 ♀ Minas Geraes. 91 ♂ 19 ♀ S. Brazil. 4 ♂ 4 ♀ Paraguay. 6 ♂ 3 ♀ Argentine.

(b). F spots small and rectangular.

Sub-sp. **punctus** Bell & Comstock 1948: ♂ St Vincent.

B.M. 3 ♀ Guadeloupe. 3 ♂ 1 ♀ St Kitts. 3 ♂ 3 ♀ St Lucia. 22 ♂ 6 ♀ Dominica. 2 ♂ 3 ♀ St Vincent.

**C.4. CHIOIDES** Lindsey 1921: type *catillus* Cramer: fixed by author as *albofasciata* Hewitson, which is a sub-species of *catillus*.

A compact genus. F cubitus is long and curved between the origins of veins 3 and 4 and vein 4 is nearer to vein 6 than to vein 3: the lower fork of the radius reaches the cubitus nearer to vein 3 than to vein 4: veins 6 and 7 are divergent at their origins and not parallel as in *Proteides* and *Epargyreus*: no hyaline apical spot in space 9 as in *Aguna*. Unf with a conspicuous dark brown triangle between the apex and the apical spots, adjoining the latter. H always with a long tail and ♂ with a costal fold upf. Uncus divided.

1a (3a). Unh with a continuous central pale band from vein 1b to vein 8. F apical spots in spaces 8 and 7 oblique to the costa and directed, in line with the spot in space 6, to the upper part of the termen.

1 (2). Unh the central pale band reaches vein 8 mid costa or rather nearer to the base than to the apex. Gnathos undivided: tip of cuiller bifid.

**catillus.** 8 sub-species.

(a). Unh the central band white, of the same width throughout. F central yellow spots separated, those in spaces 2 and 3 of equal size. ♂ F 23 mm.

#### C.4. CHIOIDES

Sub-sp. **albofasciata** Hewitson 1867: ♂ Guatemala: type B.M. Fig Hewitson 1875: Holland 1931: Seitz. Genitalia fig G & S: Skinner & Williams 1922: Lindsey, Bell & Williams 1931.

B.M. 2 ♂ 2 ♀ Arizona. 64 ♂ 5 ♀ Mexico. 10 ♂ 1 ♀ Guatemala. 27 ♂ 3 ♀ Honduras. 3 ♂ 1 ♀ Nicaragua. 1 ♂ Salvador. 2 ♂ 1 ♀ Costa Rica. 4 ♂ Colombia.

(b). Unh central pale band dorsally widened or bifid below space 2. Band generally white.

Sub-sp. **albius** nov: ♂ Panama: type B.M.

B.M. 9 ♂ Costa Rica. 17 ♂ 13 ♀ Panama.

(c). Unh central pale band generally sullied.

Sub-sp. **catillus** Cramer 1779: ? loc: figured. Fig Seitz: Hayward 1948. Genitalia fig Williams 1926: Hayward 1948.

Synonyms. *tarchon* Hübner 1825: ? loc.

*longicauda* Sepp 1848: ♀ Surinam: figured.

B.M. 73 ♂ 14 ♀ Colombia. 67 ♂ 12 ♀ Venezuela. 15 ♂ 5 ♀ Trinidad. 2 ♂ 2 ♀ Tobago. 3 ♂ Br Guiana. 2 ♂ 2 ♀ Surinam. 5 ♂ Fr Guiana. 9 ♂ 3 ♀ Peru (Chanchamayo. Perene. Rio Colorado. La Merced. Huanco. Pozuzo). 46 ♂ 3 ♀ Bolivia (Santa Cruz). 1 ♂ 1 ♀ Itaituba. 5 ♂ 5 ♀ Pará. 1 ♂ 1 ♀ Ceara. 1 ♂ 1 ♀ Bahia. 3 ♂ 3 ♀ Pernambuco. 43 ♂ 7 ♀ S. Brazil. 31 ♂ 13 ♀ Paraguay. 40 ♂ 11 ♀ Argentine.

(d). F yellow central spots much enlarged, spot in space 2 much larger than spot in space 3 and often overlaps it and the cell spot. Unh as in *catillus*. ♂ F 24 mm.

Sub-sp. **jethira** Butler 1870: ♂ Peru: type B.M. Fig Butler 1874: Seitz.

Synonym. *macromaculata* Williams 1926: ♂ Ecuador.

B.M. 6 ♂ 1 ♀ Ecuador (Loja. Quito. Paramba. Bella Vista. Guayaquil). 10 ♂ 1 ♀ N. Peru (Charape. Manchara. Trujillo).

(e). F yellow spots enlarged, but not so much as in *jethira*. Unh pale central band, above space 3, very narrow, almost linear. ♂ F 25 mm.

Sub-sp. **churchi** Bell & Comstock 1948: ♂ Jamaica.

B.M. 13 ♂ 9 ♀ Jamaica.

(f). Above grey-brown; F spots white, placed as in

*catillus*. Unh central band white, enlarged dorsally but not bifid. ♂ F 24 mm.

Sub-sp. **cinereus** Mabilite & Vuillot 1891: ♀ "Brazil": figured. B.M. 2 ♂ Ecuador (coll Hewitson). 1 ♂ Ecuador (Valle del Catamayo, Loja: marked *cinereus* by Mabilite). 1 ♂ N.W. Peru (Vina). 1 ♀ no loc (marked *cinereus* by Mabilite and believed to be his type). 1 ♂ Peru (Carabaya).

(g). Similar to *cinereus*, of which it may be an aberration. Unh central white band dorsally divided and with an outward sullied projection in and just below space 6.

Sub-sp. **concinus** Mabilite 1877: ♂ "Brazil": type B.M.: figured.

B.M. Only the type.

(h). A much modified form, resembling the W. Indian forms of *Urbanus dorantes*. Small, ♂ F 22 mm. and tail short, 8 mm. against 16 mm. for *catillus*. Upf ♂ discal spots reduced to a dot in the cell, a small spot in space 2, and 3 apical dots: ♀ with rather larger spots, also present in spaces 3 and 1b. Unh central band pale brown: no white scaling beyond the band and the veins dark.

Sub-sp. **vintra** nov: ♂ St Vincent: type B.M.

B.M. 9 ♂ 2 ♀ St Vincent. 1 ♂ 1 ♀ Grenada.

2 (1). Unh the central pale band reaches vein 8 just before the apex: the band broad, curved, sullied white: a similar basal area, outwardly irregular: the central band extended towards the termen in space 6, as in *concinus*: beyond the central band there is a similarly coloured narrower band from vein 1b to vein 6. F the yellow spots large, as in *jethira*. ♂ F 24 mm. Genitalia quite different from *catillus*: gnathos divided: end of cuiller rounded and furnished with a long slender hooked process.

**iverna** nov: ♂ Peru, Chorica: type B.M.

B.M. 1 ♂ Colombia. 5 ♂ Ecuador (Loja, Guayaquil). 2 ♂ 3 ♀ Peru (Chorica. Elen. Trujillo).

3a (1a). Unh without any definite pale central band: a conspicuous small white spot at end of cell. F apical spots in spaces 8 and 7 at right angles to the costa and directed to mid termen.



#### C.4. CHIOIDES

3b (5). F central spots as in typical *catillus*.

3 (4). Unh with a large quadrate white area in spaces 1c and 2 connected to a smaller similar area nearer the tornus in space 1c. F apical spot in space 6 conjoined to the spot in space 7. Cuiller as broad as the valva, inwardly concave and serrate.

**zilpa.** 2 sub-species.

(a). Paler and larger, ♂ F 27 mm. Below, conspicuously paler: base of costa whitish.

Sub-sp. **namba** nov: ♂ Magdalena, N. Sonora, Mexico: March 1905: Oslar: type B.M. Fig Holland 1931 as *zilpa*. B.M. 7 ♂ 2 ♀ Arizona. 8 ♂ 3 ♀ type loc.

(b). Darker and smaller, ♂ F 25 mm. Below, very dark: base of costa dark brown.

Sub-sp. **zilpa** Butler 1874: ♂ Costa Rica: type B.M.: figured. Fig Seitz: genitalia fig by G & S, Skinner & Williams 1922 and Lindsey, Bell & Williams 1931.

B.M. 18 ♂ 7 ♀ Mexico (Guerrero). 10 ♂ Guatemala. 1 ♀ Honduras. 2 ♂ Nicaragua. 9 ♂ 1 ♀ Costa Rica. 19 ♂ 2 ♀ Panama. 4 ♂ 2 ♀ Colombia. 1 ♂ 2 ♀ Venezuela. 1 ♂ Ecuador.

4 (3). Unh the quadrate white area in spaces 1c and 2 small and sullied or pale brown: wing pattern more variegated. F spot in space 6 shifted away from the spot in space 7. Cuiller narrow, less than half the width of the valva, inwardly slightly concave and smooth. ♂ F 25 mm.

**ixion** Plötz 1881: no loc: copy of MS fig of type in B.M. Synonym. *myrto* Mabille 1903: Haiti. Fig Williams 1926, ♂ and genitalia.

B.M. 18 ♂ 7 ♀ Haiti.

5 (3b). F spots white and small: ♂ with an upper dot in cell, narrow streak in space 2, dot in space 1b, trapezoidal spot in space 3: spot in space 6 detached as in *ixion*. Unh variegated as in *ixion*, but darker. Cuiller broad, inner face with a projecting central nose. ♂ F 23 mm.

**marmorosa** Herrich-Schäffer 1865: Cuba. Copy of MS figure of type in B.M. Fig Williams 1926, ♂ and genitalia. B.M. 1 ♂ Cuba.



**C.5. AGUNA** Williams 1927: type *camagura* Williams: fixed by author.

Synonym. *Tmetocerus* Poujade 1895: type *asander* Hewitson: sole species included: homonym by Hartert 1891.

A genus consisting of dissimilar species, but allied in respect of the genitalia, venation, antennal club and the abnormal position of the apical spots in spaces 9 and 8, over the end of the cell. ♂ with costal fold.

1a (3a). F lower median veinlet in cell ending nearer to origin of vein 3 than to origin of vein 4. Brown.

1 (2). H tornus lobed. F with large yellow spots as in *Epargyreus*. Unh with a whitish central band.

**asander**. 3 sub-species.

(a). Unh variable as to the intensity of the width of the central band and the submarginal whitish scaling as indicated by the Seitz figures of *asander*, *panthius* and *scheba*. ♂ F 26 mm.

Sub-sp. **asander** Hewitson 1867: ♀ Ega, Amazons: type B.M. Fig Hewitson 1875: Hayward 1948. Genitalia figured by G & S: Williams 1927: Hayward 1948.

Synonyms. *panthius* Herrich-Schäffer 1869: ? loc.

*scheba* Plötz 1882: ♀ S. America.

*euthymides* Mabilille & Boulet 1912: no loc. The name was assigned incorrectly to Plötz by Mabilille 1903 without description.

B.M. 24 ♂ 24 ♀ Mexico. 4 ♂ 4 ♀ Guatemala. 1 ♂ 1 ♀ Honduras. 1 ♂ Salvador. 1 ♀ Nicaragua. 1 ♀ Costa Rica.

3 ♂ 5 ♀ Panama. 1 ♀ Colombia. 5 ♂ 3 ♀ Venezuela.

1 ♂ 1 ♀ Surinam. 6 ♂ 2 ♀ Ecuador (Guayaquil. La Chima).

8 ♂ 8 ♀ Peru (Lima). 3 ♂ 2 ♀ E. Bolivia. 1 ♂ Itaituba.

3 ♂ 1 ♀ Bahia. 1 ♀ Pernambuco. 1 ♂ 3 ♀ Matto Grosso.

24 ♂ 20 ♀ S. Brazil. 2 ♂ 1 ♀ Argentine.

(b). Unh the central band is notched at the end of the cell: with a strong purple gloss and no submarginal whitish scaling on F or H. ♂ F 24 mm.

Sub-sp. **haitensis** Mabilille & Boulet 1912: ♂ Haiti: type B.M.

B.M. 3 ♂ 5 ♀ Haiti.

(c). Similar to *haitensis*, but spots F nearly white and smaller. ♂ F 23 mm.

C.5. AGUNA

Sub-sp. **jasper** nov: ♂ Jamaica: type B.M.

B.M. 3 ♂ 8 ♀ Jamaica.

- 2 (1). H with a long tail, 13 mm. F spots white and smaller. Unh no pale band, basal two-thirds dark brown, outer third pale brown.

**megaeles**. 2 sub-species.

(a). Unh with a strong violet gloss on the pale areas; a well-marked dark border and the dark basal area more variegated, but the dark spot at the base of the costa less conspicuous. ♂ F 22 mm.

Sub-sp. **malia** nov: ♂ Venezuela, Valencia: type B.M.

B.M. 3 ♂ 1 ♀ Venezuela.

(b). Unh with no violet gloss and the darker border faint or absent: basal dark area plain: a very conspicuous dark spot at base of costa. ♂ F 23 mm.

Sub-sp. **megaeles** Mabille 1888: ♀ Santa Catharina, S. Brazil: figured. Fig Mabille & Vuillot 1891.

Synonym. *fusciliva* Hayward 1933: ♂ Argentine: figured. Fig Hayward 1948, ♂ and genitalia.

B.M. 2 ♂ 1 ♀ Bolivia (Buenavista). 1 ♀ Espirito Santo. 2 ♂ 1 ♀ Paraguay. 1 ♀ Argentine (Misiones).

- 3a (1a). F lower median veinlet in cell ending nearer to origin of vein 4 than to origin of vein 3. Species mostly green above, except for *albistria*.

3b (13). F apical spots in spaces 8 and 9 oblique to the costa and directed to the upper part of the termen.

3c (11a). Unh central band sharply defined outwardly as well as inwardly.

3d (6a). H lobed at end of vein 1b rather than tailed, the projection beyond the termen not exceeding 2 mm.

3 (4a). Unh with basal green suffusion, conspicuous in ♂, may be absent in ♀. Above brighter green than usual, and the hyaline spots larger and of a deeper yellow. Unh white band 2 mm., regular and hooked before vein 1b. F spot in space 2 quadrate more or less overlapping the cell spot and the spot in space 3. ♂ F 23 mm.

**claxon** nov: ♂ Mexico, Atoyac, Vera Cruz: May: H. H. Smith: type B.M.: genitalia figured by Godman & Salvin as *coelus*. Genitalia fig by Williams 1927, also as *coelus*.

B.M. 6 ♂ 3 ♀ Mexico. 1 ♀ Honduras. 1 ♀ Nicaragua.  
1 ♂ Panama. 1 ♂ Colombia. 4 ♂ 1 ♀ Venezuela. 1 ♂  
Itaituba—Obidos (with smaller spots F).

4a (3). Unh without basal green suffusion.

4 (5). Upf spot in space 2 quadrate, just overlapping the cell spot: spots deep yellow. Unh the white band is very variable: in 3 ♂ it is regular, as in *claxon*: in the ♂ from Iquitos and all the ♀ it is produced centrally to as much as 7 mm., inwardly convex and outwardly angled at veins 4 and 6. The genitalia, *vide* plate, indicate the distinctness of this species. ♂ F 23 mm.

**clina** nov: ♂ Bogotá: type B.M.

B.M. 1 ♂ Colombia (Bogotá). 1 ♂ Venezuela. 1 ♀ Pará.  
1 ♂ Iquitos. 1 ♀ Pebas. 1 ♂ 2 ♀ Peru (Yahuas Terr. La Merced).

5 (4). Upf spot in space 2 narrow, hour-glass shape, separated from the cell spot in the ♂, may just overlap it in the ♀. Unh band in ♂ narrow, 1 mm., tapering slightly to costa: broader, 2 mm., in ♀. ♂ F 22 mm.

**aurunce** Hewitson 1867: ♀ Amazons: type B.M. Fig Hewitson 1875. ♂ and genitalia fig as *gideon* by Williams 1927. Fig Seitz as *coelus*, upperside fig only.

Synonym. *gideon* Plötz 1881: no loc.

B.M. 1 ♂ 6 ♀ Guatemala. 2 ♂ 2 ♀ Nicaragua. 3 ♀ Panama.  
6 ♂ 4 ♀ Colombia. 15 ♂ 19 ♀ Venezuela. 5 ♂ 6 ♀ Trinidad.  
1 ♂ 2 ♀ Br Guiana. 2 ♂ 1 ♀ Fr Guiana. 1 ♂ Peru (Tara-pote). 1 ♂ 4 ♀ Up Amazons (Teffe. Itaituba. Obidos).  
1 ♂ 2 ♀ Pará. 2 ♂ 3 ♀ "Brazil".

6a (3d). H tailed.

6b (9a). H tail short and broad, 4 mm. long in ♂, 5 mm. long in ♀, as in the Cramer figure of *coelus*.

6c (8). Above bases green, as in preceding species.

6 (7). Unh band in ♂ straight, with regular edges, 1 mm. wide: in ♀  $2\frac{1}{2}$  mm. F spots small, in a stepped line; spot in space 2 narrow, as in *aurunce*. Unh ♂ with rather faint basal green suffusion. ♂ F 21 mm.

C.5. AGUNA

**coelus** Stoll 1781: ♀ no loc: figured. Fig Seitz, underside only: upperside is of *aurunce*. Fig of genitalia by G & S and Williams 1927 are of *claxon*.

B.M. 2 ♂ 1 ♀ Guatemala. 1 ♀ Nicaragua. 1 ♂ Costa Rica. 3 ♀ Venezuela. 2 ♂ 1 ♀ Trinidad. 1 ♂ 1 ♀ Br Guiana. 1 ♂ 3 ♀ Fr Guiana. 1 ♀ Surinam. 2 ♂ 6 ♀ Amazons (Tapajos. St Paulo d'Olivenca. Obidos. Santarem). 21 ♂ 20 ♀ Pará. 1 ♂ 2 ♀ Maranham. 1 ♀ Matto Grosso. 1 ♂ "Rio" (Miles Moss).

7 (6). Unh band in ♂ very narrow,  $\frac{3}{4}$  mm., curved outwards at lower end, and irregular throughout: in ♀  $1\frac{1}{2}$  mm. wide. F spots larger and more contiguous. Unh no basal green suffusion. ♂ F 22 mm.

**hypozoneus** Plötz 1881: Lagayra. ♂ and genitalia figured by Williams 1926 as *ganna*.

B.M. 2 ♂ Itaituba. 1 ♂ Goyaz. 1 ♂ São Paulo. 2 ♀ no loc (ex coll Kaden).

8 (6c). Above bases brilliant blue, without any green tinge. F spots small and white: no spot in space 3. Unh white band narrow, 1 mm. ♂ F 22 mm.

**williamsi** Hayward 1935: ♀ Argentine, Misiones. Fig Hayward 1948, ♀.

B.M. 2 ♂ Panama. 1 ♂ São Paulo. 1 ♀ Santa Catharina.

9a (6b). H tail narrow and long  $7\frac{1}{2}$  mm.

9 (10). Above bases green as in *coelus*. F spots in ♂ small and separated; larger in ♀. Unh band narrow, regular, of even width. ♂ F 20 mm.

**ganna** Möschler 1878: ♀ Venezuela. Fig Mabilie & Vuillot 1891: Seitz. Figs by Williams 1926 are of *hypozoneus*.

B.M. 1 ♀ Panama. 1 ♂ Colombia. 3 ♂ 5 ♀ Venezuela. 1 ♀ Surinam. 1 ♀ Itaituba. 2 ♂ Peru (La Merced. Lower Ucayali). 1 ♂ Argentine (Tucuman).

10 (9). Above bases greenish blue. ♂ F spots greatly reduced: lower part of cell spot and upper part of spot in space 2 absent, leaving a prominent costal spot, upper dot in cell, lower dot in space 2, detached dot in space 1b and the



usual apical spots. In ♀ spots normal, as in *coelus*. Unh uniform brown, central white band  $\frac{3}{4}$  mm., slightly increasing towards costa. ♂ F 23 mm.

**cirrus** nov: ♂ Alto de Sierra, São Paulo: type B.M.

B.M. 1 ♂ São Paulo. 7 ♀ Santa Catharina, Theresopolis.

**11a** (3c). Unh central band outwardly diffused, inwardly sharply defined. Above like *ganna*, tail broader.

11 (12). Tail 10 mm. long. ♂ F 22 mm.

**metophis** Latreille 1824: ♀ Brazil: type B.M. Fig Boisduval 1836 (*Hist. Nat. Ins. spec. gen* 1 : pl 13): ♂ and genitalia by Williams 1926. Fig in Seitz is of *Polythrix metallescens*.

B.M. 1 ♂ 1 ♀ Mexico. 1 ♂ Nicaragua. 1 ♂ 1 ♀ Panama.

2 ♂ Venezuela. 1 ♂ Matto Grosso. 4 ♂ 5 ♀ S. Brazil.

**12** (11). Tail 7 mm. long. Genitalia differ. ♂ F 24 mm.

**camagura** Williams 1926: ♂ Matto Grosso: figured, ♂ and genitalia. Based on a unique specimen: the figure exactly resembles *metophis* ♀.

B.M. None. Genitalia figure adapted from Williams.

**13** (3b). F apical spots in spaces 8 and 9 at right angles to the costa and directed to mid termen. Above bases dull dark greenish, not metallic. F spots small and white, spot in space 3 more conspicuous than usual and farther from the spot in space 2. Unh very dark brown. Tail narrow and long, 12 mm. ♂ F 22 mm.

**albistria**. 2 sub-species.

(a). Unh white band  $1\frac{1}{2}$  mm. wide.

Sub-sp. **leucogramma** Mabilie 1888: ♀ Venezuela: figured.

Synonym. *guatemelaina* Ehrman: ♂ Guatemala.

B.M. 5 ♂ 2 ♀ Colombia (Magdalena Valley). 2 ♂ Venezuela.

(b). Unh white band narrower, less than 1 mm. wide.

Sub-sp. **albistria** Plötz 1881: Rio. ♂ and genitalia fig by Williams 1926.

Synonyms. *chulus* Plötz 1881: S. America. Fig Seitz.

*glaphyrus* Mabilie 1888: Blumenau: figured.

*leucodesma* Godman 1907: "Name on Plötz's MS plate 47 and = *chulus*".

#### C.6. TYPHEDANUS

B.M. 6 ♂ 2 ♀ Bolivia (Santa Cruz. Buenavista. Chiquitos).  
5 ♂ 1 ♀ Santarem. 1 ♂ Goyaz. 6 ♂ 1 ♀ Matto Grosso.  
1 ♂ Paraguay.

**Note.** In the genitalia the differences lie in the aedeagus and the clasp, which alone are shown in the figures for most of the species. The aedeagus is seen from the left.

**C.6. TYPHEDANUS** Butler 1870: type *umber* Herrich-Schäffer: sole species included was *zephyus* Butler, which is a synonym of *umber*.

A genus comprising several superficially very dissimilar species, but the resemblance of the structural characters indicate a generic affinity. The antennal club is angled and there is more of the nudum on the club than on the apiculus. There is no costal fold in the ♂, but on uph there is radiating hair tuft arising from near the base of space 1c. The genitalia are of a similar type, with an undivided uncus and gnathos. The hindwing is produced at the tornus: the type has no tail, but the majority of the species have a long tail. One species, *ampyx*, closely resembles *Astraptes anaphus* superficially. ♂ F 20-23 mm.

1a (6a). H tailed.

1 (2a). Uph tail and tornal area white.

**orion** Cramer 1779: Surinam: figured. Fig by Drury 1782: Westwood 1837: Seitz. Genitalia fig by Williams 1926.

B.M. 1 ♀ Colombia. 2 ♂ Venezuela. 4 ♂ 4 ♀ Surinam. 4 ♂ 4 ♀ Fr Guiana. 1 ♂ 1 ♀ Ecuador (R. Napo). 10 ♂ 1 ♀ Peru (Chanchamayo. La Merced. Loreto. Ucayali). 2 ♂ 1 ♀ Bolivia (Buenavista. Tanampaya). 3 ♂ 5 ♀ Up Amazons (Obidos. Itaituba. Rio Madeira. Iquitos). 14 ♂ 12 ♀ Pará. 1 ♀ Pernambuco. 1 ♂ 2 ♀ Maranh. 2 ♂ Goyaz. 2 ♂ 2 ♀ Matto Grosso. 1 ♂ 5 ♀ Brazil. 1 ♂ 1 ♀ Paraguay.

2a (1). Uph tail and rest of wing brown.

2b (5). Unh with conspicuous central and discal dark bands convergent apically.

2 (3a). Unh ground colour conspicuously striated dark brown: dark basal band in spaces 7 and 8: the central band broken about the upper end of the cell and the discal band continuous to vein 8. Unf dorsum inconspicuously paler.

**undulatus** Hewitson 1867: ♀? loc: type B.M. Fig Hewitson 1873: Seitz: Mabilite & Vuillot 1891. Genitalia fig by G & S, and Williams 1926. ♂ and genitalia fig Hayward 1948.

Synonyms. *sumichristi* Scudder 1872: Mexico.

*niciasius* Plötz 1881: Brazil.

*elongatus* Plötz 1881: Brazil. Fig Seitz.

B.M. 16 ♂ 7 ♀ Mexico. 5 ♂ Guatemala. 3 ♂ Honduras. 1 ♀ Salvador. 5 ♂ 4 ♀ Panama. 9 ♂ 2 ♀ Colombia. 17 ♂ 8 ♀ Venezuela. 1 ♂ 1 ♀ Trinidad. 1 ♂ Br Guiana. 2 ♂ 2 ♀ Surinam. 2 ♀ Fr Guiana. 6 ♂ 2 ♀ Bolivia (Santa Cruz. Buenavista. Tanampaya). 5 ♂ 6 ♀ Up Amazons (Teffe. Manicore. Fonte Boa. Obidos. Santarem). 16 ♂ 17 ♀ Pará. 3 ♂ 2 ♀ Pernambuco. 2 ♂ Bahia. 1 ♀ Maranhão. 1 ♂ Goyaz. 1 ♂ Minas Geraes. 2 ♂ 3 ♀ Matto Grosso. 7 ♂ 5 ♀ Brazil (Rio). 3 ♂ 1 ♀ Paraguay. 1 ♂ 1 ♀ Argentine.

3a (2). Unh purple washed, not striated: dark basal band broken into 2 spots in spaces 7 and 8: central band continued to vein 8 and the discal band broken at vein 7. Unf dorsum broadly and conspicuously whitish.

3 (4). Cuiller of clasp inclined but not bent over, tapers to a narrow bifid point. Generally larger, ♂ F 22 mm. Upf spot in space 3 hour-glass shape and the central band is wider. Uph hair tuft brown.

**galbula** Plötz 1881: Brazil. Fig in Seitz (very badly). Fig by Mabilite & Vuillot 1890 as *stylites* (very well) from a specimen now in B.M., without locality.

B.M. 5 ♂ Peru (Chanchamayo. La Merced. Loreto). 5 ♂ Upper Amazons (Iquitos. Pebas). 1 ♀ Rio Cururu, Matto Grosso.

4 (3). Cuiller of clasp bent over nearly at right angles. Generally smaller, ♂ F 20 mm. Upf spot in space 3 rectangular. ♂ uph hair tuft ochreous.

C.6. TYPHEDANUS

**optica.** 2 sub-species.

(a). Below ground colour pale brown. Bent over part of cuiller long and narrow.

Sub-sp. **optica** nov: ♂ Br Guiana: type B.M.

B.M. 1 ♀ Colombia. 3 ♀ Fr Guiana. 7 ♂ 2 ♀ Br Guiana.

(b). Unh much darker. Bent over part of cuiller short and very broad.

Sub-sp. **goya** nov: ♂ Goyaz, Campinas: R. Spitz.

B.M. 3 ♂ S. Peru (Chaquimayo. San Gaban). 3 ♂ Up Amazons (Itaituba. Pebas). 2 ♂ Pará. 1 ♂ Goyaz.

**5** (2b). Unh densely striated grey, bands inconspicuous. F falcate. Uph hair tuft yellow.

**stylites** Herrich-Schäffer 1869: ? loc. Fig Seitz. Fig by Mabilie & Vuillot 1890 = *galbula*.

Synonym. *janita* Schaus 1902: Rio.

B.M. 1 ♂ "Cayenne". 4 ♂ Minas Geraes. 2 ♂ 2 ♀ Brazil. 1 ♂ Novo Friburgo. 1 ♂ Parana.

**6a** (1a). H not tailed.

6 (7a). F apex falcate: termen indented at end of space 4. Unh densely striated and variegated: discal band continuous, central band broken. Upf with a small additional spot in space 4.

**aziris** Hewitson 1867: ♂ Rio: type B.M. Fig Hewitson 1867: Seitz.

B.M. 1 ♂ Rio. 2 ♂ no loc.

**7a** (6). F termen evenly convex.

7 (8). Upf with hyaline white spots, mid costa, double in cell, in spaces 2, 3 and 4, 3 apical spots. Below with conspicuous dark brown band on the brown-shaded ochreous ground. ♂ F 21 mm.

**umber** Herrich-Schäffer 1869: ? loc. Fig Seitz.

Synonym. *zephyus* Butler: ♂ Venezuela: type B.M. Fig Butler 1874.

B.M. 3 ♂ 1 ♀ Venezuela.

**8** (7). Upf no hyaline spots. Uph yellow at tornus in ♂, not in ♀. Unh ternal half of termen broadly yellow.



Closely resembles *Astraptus anaphus*, but on upf the dark discal band is broken outwards at vein 3 and is irregularly continuous with the dark apical band: in *anaphus* the discal band is continuous to vein 4, where it is widely separated from the apical band. ♂ F 23 mm.

**ampyx** Godman & Salvin 1893: ♀ Mexico: type B.M.: figured. Fig Seitz.

Synonym. *alladius* Godman & Salvin 1894: ♂ Mexico: figured ♂ and genitalia. Fig Seitz.

B.M. 14 ♂ 1 ♀ Mexico. 1 ♂ Honduras. 1 ♂ Nicaragua. 1 ♂ Costa Rica.

**C.7. POLYTHRIX** Watson 1893: type *metallescents* Mabille fixed by author.

A compact genus in respect of general appearance, characterised by the spot in space 3 of the forewing being approximate to the central spots and the apical spots being in a straight line. Hindwing elongate with a long tail. Antennal club angled. ♂ with a costal fold upf and some species have hair tufts on the wings. ♂ F 20 mm.

1a (9a). Above, head and thorax brown. Unh with dark bands and spots.

1b (6a). Upf a dark sub-basal spot in space 1b.

1 (2a). Upf no dark or hyaline spot in space 1b under the spot in space 2, but there is an obscure post-discal band commencing at the apical spots and ending with a conspicuous dark bar in space 1b between the discal spot in space 2 and the termen.

**octomaculata**. 3 sub-species.

(a). Unh with a broad discal white area. ♀ F 25 mm.

Sub-sp. **alciphron** Godman & Salvin 1893: ♀ Guerrero, Mexico: figured: type B.M. Fig Seitz, upperside only.

B.M. Only the type.

(b). Unh no white area. Upf apical spots in spaces 6, 7, 8, subequal, large and in line. ♂ F 20 mm.

Sub-sp. **octomaculata** Sepp 1848: Surinam: figured. Fig Seitz (as "*maculata*"). Genitalia fig by G & S and by Williams 1926. ♂ and genitalia fig by Hayward 1948.

### C.7. POLYTHRIX

Synonyms. *decurtata* Herrich-Schäffer 1869: ? loc. Fig Seitz showing basal green suffusion incorrectly.

*calenus* Mabilie 1888: Guatemala: figured (very badly).

*elegans* Hayward 1933: ♂ Argentine: figured.

B.M. 3 ♂ Mexico (Vera Cruz). 3 ♂ 1 ♀ Guatemala. 2 ♂ Honduras. 1 ♂ Nicaragua. 1 ♂ Panama. 11 ♂ Colombia. 6 ♂ 1 ♀ Venezuela. 2 ♂ Tobago. 4 ♂ Br Guiana. 1 ♂ 1 ♀ Fr Guiana. 18 ♂ 3 ♀ Peru (Lima. Rio Colorado. Huambo. Carabaya). 10 ♂ Bolivia (Reyes. R. Songo. Chiquitos. Tanampaya). 4 ♂ Up Amazons (Iquitos. Tonantins. Santarem). 6 ♂ 6 ♀ Pará. 1 ♂ 1 ♀ Goyaz. 2 ♂ Pernambuco. 2 ♀ Bahia. 4 ♂ Matto Grosso. 26 ♂ S. Brazil. 16 ♂ 2 ♀ Paraguay. 2 ♂ 1 ♀ Argentine.

(c). Upf apical spot in space 6 small and shifted out of line: spot in space 2 only a dot, spot in space 3 absent.

Sub-sp. **decussata** Menetries 1855: ♂ Haiti: figured. Fig Seitz.

B.M. None.

**2a** (1). Upf no dark spot in space 1b beyond the discal spot in space 2, but immediately under that spot there are 2 small dark spots, the upper one of which is often hyaline. Aedeagus with a terminal spine projected to the left, seen ventrally.

**2b** (4a). Upf spot in space 3 not overlapped by the cell spot. Unh dark band macular and irregular. Aedeagus sheaf bifid into 2 long pointed branches.

**2** (3). Upf hyaline spots in spaces 2 and 3 small and separate, widely separate from the cell spot and their inner edges are directed to the apical spots: usually only 3 apical spots, the lower one slightly shifted out of line. Unh markings as very prominent spots. Aedeagus much narrower and the terminal spine short. Clasp with the pointed tips of the cuiller and the style approximate.

**roma** nov: ♂ Pará: A. Miles Moss: type B.M.

B.M. 2 ♂ Venezuela. 2 ♂ Trinidad. 1 ♂ Br Guiana. 15 ♂ 9 ♀ Pará. 1 ♂ Goyaz.

**3** (2). Upf spots in spaces 2 and 3 larger: inner edge of the spot in space 2 more or less in line with the inner edge

of the cell spot: usually 4 apical spots, in line. Unh dark markings less conspicuous and less broken into spots. Aedeagus nearly as wide as the uncus, the spine longer. Clasp with the tips of the cuiller and style wide apart.

**asine** Hewitson 1867: ♀ Nicaragua: type B.M. Fig in Seitz incorrectly shows 2 white spots in space 1b, upf. Fig by Mabille & Vuillot 1891 is of *cecylus*. Genitalia fig by Williams 1926.

B.M. 19 ♂ 8 ♀ Mexico. 11 ♂ Guatemala. 1 ♂ 1 ♀ Honduras. 3 ♂ 1 ♀ Nicaragua. 10 ♂ 4 ♀ Costa Rica. 1 ♂ Panama. 1 ♂ N.W. Peru (Vina).

**4a** (2b). Upf spot in space 3 overlapped by the cell spot and the spot in space 2: upper hyaline dot in space 1b, usually hyaline dots in spaces 4 and 5, a spot mid costa in spaces 10 and 11 and 4 apical spots in a curved, decreasing line. Aedeagus sheath shortly bifid: aedeagus spine very long and curved down against the aedeagus. Style of clasp very short. Unh bands confluent, inconspicuous.

4 (5). Upf inner edge of the spot in space 2 is against the middle of the cell spot. Above, dark brown as in the preceding species. Cuiller slender, pointed.

**hirtius** Butler 1870: ♂ Venezuela: type B.M. Fig Butler 1874: Seitz. Genitalia fig by Williams 1926.

Synonym. *vitreus* Scudder 1872: Venezuela.

B.M. 4 ♂ 1 ♀ Colombia (Bogotá. Tolima). 4 ♂ Venezuela. 4 ♂ Peru (Huancabamba. Marcapata. Charape. Pozuzo).

**5** (4). Upf inner edge of the spot in space 2 in line with the inner edge of the cell spot. Above much lighter, grey-brown. Upf central spots large and crowded together: the sub-basal dark spot in space 1b, and the inner edging to the spots in the cell and space 2, conspicuously black on the pale ground. Cuiller broad and blunt-ended.

**gyges** nov: ♂ Rio Colorado, Peru: type B.M.

B.M. 1 ♂ Colombia (R. Meta). 6 ♂ Peru (Huancabamba. Rio Colorado. La Merced. Perene). 1 ♂ Amazons (Iquitos).

C.7. POLYTHRIX

**6a** (1b). Upf no sub-basal dark spot in space 1b: inner edges of spots in space 2 and cell in line, spot in space 3 not overlapped by the cell spot but is contiguous to the spot in space 2: 3 apical spots in line.

**6b** (8). Upf always an upper hyaline spot in space 1b, but no lower dark spot.

**6** (7). Unh dark markings very prominent. Cuiller broad, not tapered, inner edge before tip strongly serrate.

**callias** Mabille 1888: no loc. Fig Mabille & Vuillot 1891. B.M. 1 ♂ Bolivia.

**7** (6). Unh dark markings inconspicuous. Cuiller tapering to a rounded, blunt end, nowhere serrate.

**procerus** Plötz 1881: Pará. Fig Seitz.

Synonyms. *aelius* Plötz 1881: Pará. Fig Seitz.

*auginulus* Godman & Salvin 1893: ♂ Guatemala: type B.M.: ♂ and genitalia figured. Fig in Seitz looks more like *octomaculata*.

*callicina* Schaus 1902: ♀ Honduras.

B.M. 1 ♂ Guatemala. 2 ♂ Honduras. 1 ♀ Venezuela.

**8** (6b). Upf no spot in space 1b, nor on costa over the cell spot: central 3 spots small, separated. ♂ uph a conspicuous yellow hair tuft from near the base of space 7, correlated to a dark scent patch mid dorsum unf, set in a polished area.

**minvanes** Williams 1926: ♂ Matto Grosso: ♂ ♀ and genitalia figured. Genitalia fig by Hayward 1948.

B.M. 1 ♂ Pará (bodyless: genitalia fig from Williams).

**9a** (1a). Above, head and thorax green.

**9b** (12a). Unh with dark bands, as in preceding species. Upf no spot in space 1b.

**9** (10a). Upf spot in space 3 not overlapped by the spot in space 2, but contiguous to it: 3 apical spots. Uncus very broad.

**ceculus** Herrich-Schäffer 1869: ♂ ? loc: type B.M. Fig Seitz, very poorly. Figs by Williams 1926 and Hayward 1948 are of *caumus*.

B.M. 2 ♂ Colombia. 1 ♂ Br Guiana. 1 ♂ Pará.



**10a** (9). Upf spot in space 3 more or less overlapped by the spot in space 2. Uncus narrow and tapered to a quadrifid end. ♂ unh space 1b from base to middle deeply grooved and at the distal end of the groove there is a small erect hair tuft on vein 1b.

10 (11). Upf generally 4 apical spots, rarely the spot in space 9 is absent. Unh brown, with no basal green suffusion: sometimes with an inconspicuous whitish spot in space 1c at the end of the discal band.

**caunus** Herrich-Schäffer 1869: ? loc. Type figured by Mabilles & Vuillot 1891 as = *asine*. Genitalia fig by Williams 1926 as *ceculus*: by G & S as *auginus*. ♂ and genitalia fig by Hayward 1948 as *ceculus*.

Synonym. *lindora* Butler 1870: ♀ ? loc. Fig Butler 1874. B.M. 2 ♂ Mexico. 2 ♂ Guatemala. 2 ♂ Nicaragua. 3 ♂ Panama. 1 ♂ 2 ♀ Venezuela. 3 ♂ 2 ♀ Trinidad. 2 ♀ Br Guiana. 1 ♀ Surinam. 2 ♂ Fr Guiana. 3 ♂ Bolivia. 1 ♂ 1 ♀ Up Amazons (Itaituba). 7 ♂ 1 ♀ Pará. 2 ♂ Bahia. 1 ♂ Matto Grosso. 1 ♂ Goyaz. 4 ♂ 3 ♀ S. Brazil (Rio. Santa Catharina). 2 ♂ 1 ♀ Paraguay.

**11** (10). Upf with 3 apical spots. Unh paler, with basal green suffusion and a conspicuous white spot in space 1c at the end of the dark discal band. Smaller.

**auginus** Hewitson 1867: ♂ Ega, Amazons: type B.M. Fig Hewitson 1875: ♀ by Mabilles & Vuillot 1891: Seitz. Genitalia fig by G & S = *caunus*.

Synonym. *flammula* Herrich-Schäffer 1869: ? loc. Type fig by Mabilles & Vuillot 1893 as = *auginus*. Fig Seitz.

B.M. 1 ♂ Nicaragua. 2 ♂ Trinidad. 1 ♂ Br Guiana. 1 ♀ Surinam. 1 ♂ Fr Guiana. 3 ♂ 2 ♀ Amazons (Itaituba. Abuna. Madeira R.). 5 ♂ 3 ♀ Pará. 1 ♂ Minas Geraes. 1 ♂ S. Brazil (Corcovado).

**12a** (9b). Unh with a narrow white discal band. ♂ unh with conspicuous green basal suffusion, palpi and thoracic clothing green: green colouring reduced in ♀. ♂ unf with a conspicuous brown hair tuft from near base of space 1b. 12 (13). Upf with 3 rather small separated hyaline spots in spaces, 2, 3 and cell: 3 apical spots.

C.8. HERONIA

**metallescens** Mabilie 1888: ♀ Brazil: figured. Fig Seitz: G & S, ♂ and genitalia.

Synonym. *piliger* Mabilie 1891: ♂ Itaituba. Fig Mabilie & Vuillot 1893.

B.M. 1 ♀ Honduras. 2 ♂ 1 ♀ Panama. 2 ♂ Venezuela. 1 ♂ Trinidad. 1 ♀ Br Guiana. 1 ♂ Fr Guiana. 1 ♂ Peru. 9 ♂ 5 ♀ Pará.

**13** (12). Upf spot in space 3 lies at the base of space 3 and is completely merged in a narrow central hyaline band running from vein 2 to the upper edge of the cell: no apical spots.

**eudoxus** Stoll 1781: Surinam: figured. Fig Seitz.

B.M. 1 ♂ Fr Guiana.

**C.8. HERONIA** Mabilie & Boullet 1912: type *labriaris* Butler: sole species included.

An isolated genus with no near ally. Peculiar in having the mid tibiae spined and in the position of the spot in space 2 upf, which is placed before the cell spot: there is a complete row of small discal spots from space 1b to 8, no spot in space 9. ♂ with a costal fold: F 22 mm.

Single species.

**labriaris** Butler 1877: ♀ Amazons, Rio Purus: type B.M. Fig Mabilie & Boullet 1912: Seitz.

Synonym. *seneca* Plötz 1880: Brazil: copy of MS fig in B.M.

B.M. 2 ♂ Peru (La Merced. Rio Colorado). 2 ♂ Bolivia (Muschay, Beni R. Guanay, Mapiri R.). 1 ♀ Labria, Rio Purus.

**C.9. CHRYSOPLECTRUM** Watson 1893: type *otriades* Hewitson: fixed by author.

As its name implies, the genus was based on the peculiar secondary sexual characters of the ♂, recalling *Tarsoctenus*: the hind tarsi are furnished with a golden plectrum consisting of a double row of closely set spines. But the first two species do not exhibit this peculiarity, though the similarity of the ostium bursae of the females, with a triangular

pointed process on either side, establish their generic affinity. The antennae are bent beyond the thickest part of the club and the nudum on the club (12 segments) is equal in length to the nudum on the apiculus (16 segments). The cell F is as long as vein 1. The tornus H is produced and lobed. ♂ with a costal fold except in *perna*.

1a (3a). ♂ above, head, thorax and wing bases shining green; also below, the palpi, pectus and wing bases: blue instead of green in ♀ and more extensive on wings. Unh with a double yellowish spot or dash on the disc in space 1c. Cilia brown. ♂ without a tarsal plectrum; with a costal fold. Uncus of the *Urbanus* type ending in long separated points.

1 (2). ♂ upf with a narrow yellowish central band of spots in cell, spaces 2 and 3: white in ♀ and continued into space 1b, also broader. Unf dorsum pale yellow in ♂: in ♀ the band runs into a large tornal white area. ♀ below, pectus and palpi pale yellow, shaded greenish blue. ♂ F 20 mm.

**pervivax** Hübner 1819: ♀ Surinam: to replace *pertinax*. Fig Seitz.

Synonyms. *pertinax* Stoll 1790: ♀ Surinam: figured: homonym by Stoll 1781.

*schelleri* Kirby 1871: ♀ Surinam: for figure by Sepp 1853 as *pertinax* Stoll.

*eudicus* Mabilie 1888: ♂ Santa Catharina: figured.

*neobulus* Mabilie 1888: ♀ Brazil: figured.

B.M. 1 ♂ 1 ♀ Br Guiana. 1 ♀ Surinam. 1 ♀ Bolivia (Buenavista). 2 ♀ Up Amazons (Iquitos). 8 ♂ 11 ♀ Pará.

2 (1). Upf no white band in ♂. Genitalia similar and may be a dimorph of *pervivax*.

**bahiana**. 2 sub-species.

(a). ♂ F 21 mm. ♂ unf a more or less conspicuous yellowish dash mid costa, which may just enter cell: dorsum yellowish. ♀ (Plötz's MS fig of *pseudochalybe*) above unmarked: unf a narrow white central band from costa across cell and a bluish spot in space 2, above a tornal white area.

C.9. CHRYSOPLECTRUM

Sub-sp. **bahiana** Herrich-Schäffer 1869: ♂ ? loc. Fig Seitz: genitalia by Williams & Bell 1934.

Synonyms. *pseudochalybe* Herrich-Schäffer 1869: ♀ ? loc. Plötz's MS fig of type in B.M. Fig Seitz.

*euphronius* Mabille 1888: ♂ Yuruty: figured.

*hurga* Schaus 1902: ♂ Peru.

*alexanderi* Weeks 1906: ♂ Venezuela. Fig Weeks 1911.

B.M. 1 ♂ Br Guiana. 1 ♂ Surinam. 1 ♂ Amazons (St Paulo d'Olivencia).

(b). ♂ F 24 mm. Unf dorsum brown: semi-hyaline double yellowish spot on either side of the origin of vein 11 and a lower spot in the cell between the origins of veins 3 and 4. ♀ (Plötz's MS fig of *orphne*) upf with a white band, as in *pervivax*: unf dorsum brown and the white band goes to vein 1, where it turns towards the base above the vein for a short distance.

Sub-sp. **orphne** Plötz 1882: ♀ Rio: copy of Plötz's MS plate in B.M. Fig Seitz.

B.M. 1 ♂ Rio.

3a (1a). No green or blue colouring at wing bases, but there is often a strong gloss in a side light. Uncus short and broad, division at end shallow.

3b (7). Veins concolorous with the ground colour.

3c (5a). Unh without blue discal spots: generally with 2 discal white spots in space 1c. ♂ with a costal fold and a golden plectrum on hind tarsi.

3 (4). Upf unmarked other than by obscure dark bands. Cilia generally brown, but in one B.M. specimen they are narrowly white on H and in space 1b on F. ♂ F 20 mm. Genitalia as in *perniciosus*, of which it may be a dimorphic form.

**otriades** Hewitson 1867: ♂ Amazons: type B.M. Fig Hewitson 1875 and in Seitz.

B.M. 1 ♀ Venezuela. 1 ♀ Amazons (Villa Nova). 7 ♂ Pará.

4 (3). Upf with hyaline white spots in cell, spaces 3, 2 and often in space 1b.

**perniciosus**. 2 sub-species.

(a). ♂ 23 mm. Back of clasp rounded. Unh purple



brown: discal spots obsolete: cilia brown. Upf band compact and unf dorsum white.

Sub-sp. **epicincia** Butler & Druce 1872: ♂ Costa Rica: type B.M. Fig G & S, ♂ and genitalia as *perniciosus*.

B.M. 1 ♂ 1 ♀ Mexico. 1 ♂ Nicaragua. 1 ♂ Costa Rica.

(b). ♂ generally 21 mm., but specimens from Peru and Bolivia are larger. Back of clasp angled. Unh brown, discal spots in space 1c conspicuous. Upf spotting in ♂ is very variable, may be compact (always in ♀) or the cell spot may be widely separated. Cilia generally narrowly white on H and in space 1b on F.

Sub-sp. **perniciosus** Herrich-Schäffer 1869: ? loc. MS fig of type in B.M. Fig Seitz: G & S figs = *epicincia*.

Synonym. *justus* Plötz 1882: S. America. Fig Seitz.

B.M. 1 ♂ 1 ♀ Panama. 1 ♂ Colombia. 5 ♂ 1 ♀ Br Guiana. 1 ♂ Surinam. 1 ♂ 1 ♀ Fr Guiana. 1 ♂ Peru (Chanchamayo). 1 ♂ Bolivia (Santa Cruz). 16 ♂ 8 ♀ Amazons (Iquitos to Santarem). 9 ♂ 4 ♀ Pará. 1 ♀ Maranh. 2 ♂ Minas Geraes.

5a (3c). Unh with blue discal spots. Upf spots as in *perniciosus*, but the cell spot overlaps the spot in space 2 and is far from the spot in space 3. Cilia white on H and in space 1b F.

5 (6). ♂ with a costal fold and a golden plectrum on the hind tarsi. Large, ♂ F 25 mm. Upf with an obscure post-discal band of large blue spots in spaces 1b to 4. Unh with a discal band of broad blue spots from space 1c to space 5 or 6.

**orpheus** Plötz 1882: Pará. Copy of Plötz's MS fig of ♂ in B.M. The fig in Seitz is believed to have been taken from Plötz's fig of the ♀ and to represent the ♀ of *perna*.

B.M. 1 ♂ Amazons (Tarapote). 1 ♂ no loc. 1 ♀ Fr Guiana.

6 (5). ♂ no costal fold: tarsal plectrum dark red and less conspicuous. ♂ F 20 mm. Unf tornal bluish white area much more conspicuous. Unh the discal blue spots narrower and extend to space 7: spot in space 6 is a narrow streak in the ♂.

C.10. ZESTUSA

**perna** nov: ♂ Colombia, Bogota: type B.M. ♀ fig Seitz as *orpheus*.

B.M. only the type.

7 (3b). ♀ below, all veins white except at base, also on disc uph. Upf band compact and broad. Cilia brown, white at apex, on F: narrowly white on H. Genitalia of ♂ said to be as in *perniciosus*. ♀ F 25 mm.

**albovenae** Bell 1932: ♂ Santa Catharina, Brazil.

B.M. 1 ♀ Santos, S. Brazil.

**C.10. ZESTUSA** Lindsey 1925: type *staudingeri* Mabilie: fixed by author: to replace *Plestia*.

Synonym. *Plestia* Mabilie 1888: type *staudingeri* Mabilie: sole species included: homonym by Stal 1871.

Antennae broadly arcuate, nudum very long, 34 segments. Palpi porrect. Tail very broad and short,  $3\frac{1}{2}$  mm. Thorax and legs very hairy. Facies abnormal: upf, in addition to the central hyaline spots in the cell and spaces 2 and 3, there is a confluent discal series in spaces 1b, 2 and 3: also an apical series in spaces 6, 7, 8 and 9, the last two being conjoined and situated just beyond the end of the cell, as in *Codatractus*. ♂ upf with costal fold. ♂ F 20 mm.

1 (2). Uph with hyaline white spots.

**dorus** Edwards 1882: ♂ Arizona. Fig G & S: Holland 1931: Seitz. Genitalia fig by Lindsey, Bell & Williams 1931, and Skinner & Williams 1922.

B.M. 28 ♂ 4 ♀ Arizona. 7 ♂ 2 ♀ New Mexico. 1 ♂ Texas. 1 ♀ Mexico (N. Sonora).

2 (1). Uph without hyaline spots: 2 rows of yellow spots. **staudingeri**. 2 sub-species.

(a). F spots more developed, present from space 1b to 9. Sub-sp. **elwesi** Godman & Salvin 1893: ♂ Orizaba, Mexico: ♂ and genitalia figured: type B.M. Fig Seitz.

B.M. 1 ♂ type.

(b). F spots reduced, none in spaces 4 and 5. Below darker. Sub-sp. **staudingeri** Mabilie 1888: ♂ Guatemala: figured. Fig G & S.

B.M. None.

**C.II. CODATRACTUS** Lindsey 1921: type *bryaxis* Hewitson: fixed by author as *imitatrix* Mabilie, a synonym of *imalena* Butler, which is a sub-species of *bryaxis*.

Synonym. *Heteropia* Mabilie: type *imitatrix* Mabilie: fixed by Watson 1893: homonym by Carter 1886.

A compact genus in respect of facies and genitalia. Antennae broadly arcuate. F with conjoined apical spots in spaces 8 and 9, just beyond end of cell: spot in space 3 generally midway between the termen and the central band. Unh with 3 dark irregular bands. Tailed or tailless. ♂ no costal fold.

1a (9). Unh with dark bands.

1b (4a). Tailed.

1 (2a). F spot in space 1b completely detached from the spot in space 2. Gnathos short, less than half uncus. Top of cuiller strongly humped. ♀ ostium bursa furnished with 2 long thin projecting processes.

**carlos.** 3 sub-species.

(a). Above, basal half F and two-thirds of H clothed with ochreous hairs, very bright in fresh specimens. Unh identical with *alcaeus*; the white discal area rather more extensive, often extending above vein 4 towards the apex. ♂ F 25 mm.

Sub-sp. **carlos** nov: ♂ Honduras: type B.M. Fig as *alcaeus* by Holland 1931: Seitz: genitalia by G & S, Skinner & Williams 1922: Lindsey, Bell & Williams 1931.

B.M. 3 ♂ Mexico. 3 ♂ 1 ♀ Guatemala. 6 ♂ Honduras. 15 ♂ 1 ♀ Costa Rica. 6 ♂ Panama. 1 ♂ Colombia. 1 ♂ Fr Guiana (?). 1 ♂ Peru (La Merced) (?).

(b). Above, basal ochreous colouring absent. Below, as *carlos*. ♂ F 24 mm.

Sub-sp. **rowena** nov: ♂ Venezuela, Putao Guiria: Aug 1891: type B.M.

B.M. 2 ♂ Colombia. 1 ♂ Venezuela.

(c). As *rowena*, smaller, ♂ F 22 mm. Unh the discal white colouring obsolete.

Sub-sp. **arguta** nov: ♂ Trinidad, N. Mountains: Dec to Jan 1939: A. Hall: type B.M.

B.M. 3 ♂ 2 ♀ Trinidad.

C.II. CODATRACTUS

2a (1). F spot in space 1b overlapped by the spot in space 2. Gnathos nearly as long as the uncus. Cuiller of clasp flat-topped. Above no yellow colouring.

2 (3). Unh with a conspicuous white discal area.

**alcaeus**. 2 sub-species.

(a). F central spots normal, spot in space 3 widely separate. ♂ F 25 mm.

Sub-sp. **alcaeus** Hewitson 1867: ♀ Nicaragua: type B.M. Fig Hewitson 1875. All other figures are referable to *carlos*, q.v.

Synonym. *montezuma* Scudder 1872: ♂ Tehuantepec.

B.M. 3 ♂ Mexico. 4 ♂ 2 ♀ Honduras. 2 ♀ Nicaragua. 1 ♀ Costa Rica.

(b). F central spots greatly enlarged and yellower: spot in space 2 is  $3\frac{1}{2}$  mm. long and reaches the spot in space 3. ♂ F 24 mm.

Sub-sp. **apulia** nov: ♂ Ecuador (coll Hewitson): type B.M. B.M. 1 ♂ type. 1 ♂ H.M.S. *Herald* expedition 1860, obtained most probably in Panama.

3 (2). Unh no discal white area. Above black, bases dull greenish ochreous. F spots as in *alcaeus*. ♂ F 26 mm.

**aminias** Hewitson 1867: ♂ Minas Geraes: type B.M. Fig Hewitson 1875: Seitz: genitalia by Williams & Bell 1933: ♂ and genitalia by Hayward 1948.

Synonyms. *pithys* Schaus 1902: Castro, Parana.

*breyeri* Hayward 1935: ♀ Argentine.

B.M. 1 ♂ 1 ♀ Bolivia (Sara, Santa Cruz. Buenavista). 1 ♂ Minas Geraes. 7 ♂ 6 ♀ S. Brazil (Parana). 1 ♂ Paraguay. 10 ♀ Argentine.

4a (1b). Tailless.

4b (7a). Uncus deeply divided and arms wide apart.

4c (6). Uncus and gnathos arms stout, divergent.

4 (5). Gnathos arms turned outwards at ends. Top of cuiller humped. Above base F and most of H dull ochreous. Unh with a sullied white post-discal area. Wings produced. ♂ F 28 mm.

**arizonensis** Skinner 1905: ♂ Arizona. Fig by Skinner 1911:



Holland 1931: genitalia by Skinner & Williams 1922: Lindsey, Bell & Williams 1931.

B.M. 11 ♂ Arizona. 6 ♂ Mexico (Iguala. Cuernavaca. Rinconada. Oaxaca. Guerrero).

- 5** (4). Gnathos arms straight. Cuiller flat-topped. Above uniform dark brown. Unh no white discal area. Wings not produced. ♂ F 25 mm.

**melon** Godman & Salvin 1893: ♂ Guerrero: type B.M.: figured. Fig Seitz.

B.M. 15 ♂ 1 ♀ Mexico (Jalisco. Guerrero. Rinconada. Coatepec). 2 ♂ Guatemala. 3 ♂ Nicaragua. 1 ♂ Trinidad.

- 6** (4c). Uncus arms slender, straight. Gnathos arms slender, turned inwards. Above, like *arizonensis*, spots smaller, yellower. Unh with broad discal white area. ♂ F 23 mm.

**cyledis** Dyar 1912: ♂ Mexico. Fig Seitz: genitalia fig by Williams & Bell 1934.

B.M. 1 ♂ Mexico (Iguala).

- 7a** (4b). Uncus not deeply divided at end.

7 (8). Uncus tapered, end scalloped. Cuiller inclined, not bent over as usual. Wings broad, coloured above as *arizonensis*. Unh very broad white area reaching termen and dorsum. ♂ F 24 mm.

**cyda** Godman 1901: ♂ Honduras: type B.M.: figured. Fig in Seitz.

B.M. 10 ♂ Honduras.

- 8** (7). Uncus broad-ended, division shallow. Cuiller flat-topped. ♂ F 25 mm.

**bryaxis**. 2 sub-species.

(a). Above, basal half F and most of H bright yellow. Unh with narrow white discal area.

Sub-sp. **bryaxis** Hewitson 1867: ♂ Guatemala: type B.M. Figured Hewitson 1873: Seitz: genitalia fig by G & S.

B.M. 2 ♂ Mexico (Vera Cruz). 5 ♂ 3 ♀ Guatemala. 1 ♂ Honduras.

C.12. RIDENS

(b). Above, basal half of F and most of H dark greenish blue. F spots bluish white. Unh as *melon*.

Sub-sp. **imalena** Butler 1874: ♀ Costa Rica: figured: type B.M. Fig Seitz.

Synonym. *imitatrix* Mabille 1889: Brazil: type B.M.

B.M. 14 ♂ 2 ♀ Costa Rica. 13 ♂ 2 ♀ Panama. 1 ♂ Colombia. 2 ♂ Pará. 1 ♂ Brazil.

9 (1a). Unh no dark bands: a central whitish band, as in *Aguna asander*. Above like *cyledis*. ♂ F 22 mm.

**hyster** Dyar 1916: Mexico. Fig Seitz.

B.M. 2 ♂ Mexico (Ciudad. Acapulco, Guerrero).

**C.12. RIDENS** Evans (p. 40 *ante*): type *Eudamus ridens* Hewitson: fixed by author.

A genus that is related to *Urbanus* in respect of the ♂ genitalia, having a deeply divided uncus and an undivided gnathos. It is separated because of the much stouter antennal club, which is more or less arcuate. Typically with apical spots in spaces 6 to 9, ending over the end of the cell, and a central band of hyaline white spots from space 1b to the costa, the spot in space 3 being more or less separated. The last two species lack these forewing markings, but have similar genitalia and antennae. ♂ with costal fold.

1a (12a). Upf with a central band of hyaline spots.

1b (4a). Unh with a broad central white band from space 1c to space 7, divided at end of cell. Back of cuiller produced to a sharp point.

1c (3). Tailless. F central spots very large: spots present in spaces 4 and 5. ♂ F 25 mm.

1 (2). F spot in space 3 detached from spot in space 2: spot in space 1b not reaching vein 1. Upf at most obscure traces of the central band from below.

**crison**. 2 sub-species.

(a). Above, thorax and wing bases dark blue. Unh central band pale blue and much broken up.

Sub-sp. **crison** Godman & Salvin 1893: ♀ Guatemala: type B.M.: figured. Fig Seitz.

B.M. Only the type.

(b). Above thorax and wing bases dull grey. Unh band compact, white, divided by dark veins.

Sub-sp. **cachinnans** Godman 1901: ♂ Chiriqui: type B.M.: figured. Fig Seitz.

B.M. 1 ♂ Costa Rica. 2 ♂ 1 ♀ Panama.

- 2 (1). F spot in space 3 touching spot in space 2: spot in space 1b reaches vein 1. Uph a central white hyaline band from vein 2 to vein 7: a tuft of greyish white hairs in space 1b beyond the middle. Antennal club conspicuously white above.

**ridens** Hewitson 1876: Chiriqui. Fig G & S, ♂ and genitalia: Seitz.

Synonym. *coronus* Plötz 1882: Chiriqui.

B.M. 13 ♂ 3 ♀ Panama.

- 3 (1c). H with a white tail, 7 mm. long. F central spots small and wide apart. Above thorax and wing bases greenish blue. Small, ♂ F 22 mm.

**biolleyi** Mabille 1900: Costa Rica.

B.M. 2 ♂ 5 ♀ Costa Rica. 1 ♀ Panama.

- 4a (1b). Unh no central white band: often with a more or less developed row of diffuse discal white spots, beyond which the area to the termen may be white powdered, and there may be an obscure cell spot. Back of cuiller rounded.

4b (11). Above, black, thorax and wing bases blue or green.

4 (5a). H with a long black tail. F with spots in spaces 4 and 5: central band narrow and regular, inner edges of spots in spaces 1b, 2, cell and costa in line, and the spot in space 3 just overlapping the spot in space 2. Cilia F dark brown; H white, unchequered. ♂ F 28 mm.

**harpagus** Felder 1867: ♂ Colombia: type B.M.: figured. Fig Seitz: genitalia by Williams 1927.

Synonym. *terraccina* Ehrman 1907: ♀ Colombia.

B.M. 3 ♂ Colombia. 6 ♂ Ecuador (Ambato. Baños. R. Numbala). 32 ♂ Peru (Chanchamayo. Huancabamba.

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Pozuzo. Carabaya. R. Inambari. Huayabamba. Oxa-pampa). 18 ♂ Bolivia (Cochabamba. Artillero. San Jacinto).

**5a (4).** Tailless.

5 (6a). F cilia brown throughout: H white, unchequered. F apical spots in spaces 6 to 9 in line: central band as in *harpagus*. Cuiller strongly humped at end, with a straight beak directed inwards. ♂ F 28 mm.: wings produced as in *harpagus*.

**philistus.** 2 sub-species.

(a). F without spots in spaces 4 and 5.

Sub-sp. **philia** nov: ♂ Colombia, Cauca, Juntas: M. de Mathan: end 1897-8: type B.M. Fig Seitz pl 168 of *dinora* upperside = *philia*.

B.M. 3 ♂ Colombia (Cauca. R. Dagua).

(b). F with spots in spaces 4 and 5, as in *harpagus*.

Sub-sp. **philistus** Hopffer 1874: ♂ Peru. Fig Seitz.

B.M. 1 ♂ Peru (Chanchamayo).

**6a (5).** F cilia at tornus white.

6b (9a). F upper and lower edges of spot in space 2 equal.

6 (7a). F the double costal spot is small and is placed over the outer edge of the cell spot: spot in space 3 small, overlapped by the spot in space 2, but widely separated from the cell spot. Unh the double white discal spot in space 1c is usually conspicuous and the rest of the discal band faint or absent. Cilia H usually unchequered. Cuiller without a beak. ♂ F 26 mm.

**mephitis** Hewitson 1876: Chiriqui. Fig G & S: genitalia by Williams 1927.

Synonym. *dinora* Plötz 1881: Chiriqui. Fig Seitz pl 168, underside = *mephitis*, upperside = *philia*.

B.M. 1 ♀ "Honduras" (resembles ♀ of *fulima*). 1 ♂ Costa Rica. 1 ♂ Panama. 8 ♂ Colombia (R. Dagua. Cauca. Valdivia. Bogotá). 3 ♂ Peru (Rentema Falls. Moyabamba). 1 ♂ Bolivia (La Paz).

**7a (6).** F the double costal spot over the centre of the cell spot.



7 (8). F inner edge of the spot in space 2 against the centre of the cell spot, or even more outward: spot in space 3 more or less overlapped by the spot in space 2, and far from the cell spot. H cilia conspicuously chequered usually. Cuiller flat-topped, with a short beak, curved down. ♂ F 27 mm.

**fulminans** Herrich-Schäffer 1869: ? loc. Fig Seitz pl 168, upperside correctly = *fulminans*, but underside = *fulima*: genitalia fig by Williams 1927.

B.M. 4 ♂ Colombia. 3 ♂ Ecuador (Loja. Zamora. R. Pastaza). 8 ♂ Peru (Chanchamayo. Carabaya. Huambo. Huancabamba. Huayabamba. Huacamayo. Moyabamba). 1 ♂ Bolivia (aberrant, F spots very reduced and H cilia white).

8 (7). F inner edge of spot in space 2 in line with the inner edge of the cell spot: spot in space 3 is contiguous to the cell spot, rendering the band compact. Unh discal spots faint or obsolete, but the outer discal area to the termen is conspicuously paler brown. Cilia H narrowly white, not chequered. Cuiller slightly humped, beak long and straight. ♂ F 25 mm.

**fulima** nov: ♂ Espirito Santo: type B.M. Fig Seitz pl 168, underside, as *fulminans*.

B.M. 1 ♂ Pará. 7 ♂ 2 ♀ S. Brazil (Espirito Santo. Parana. Rio Grande. Theresopolis. Santa Catharina).

9a (6b). F lower edge of spot in space 2 elongate outwards, much longer than the upper edge.

9 (10). F no costal or apical spots: spot in space 1b with its lower edge elongate, almost reaching the termen. Unh plain dark green with a long sub-tornal spot in space 1c. Unf a suffused white triangle under the spot in space 1b. Cilia H narrow, not chequered. Cuiller humped and toothed at the top of the hump, beak straight. ♂ F 30 mm.

**panche** Williams 1927: ♂ Colombia: ♂ and genitalia figured. B.M. 2 ♂ Ecuador (Paramba). 1 ♀ Colombia.

10 (9). F with a double costal spot, not so wide as the cell spot: 3, 2 or 1 (in space 9), or no apical spots: spot in

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space 1b normal, lower edge not elongate. Unh with a more or less developed discal band, as in *fulminans*. Cilia H chequered. Cuiller as in *panche*, but not toothed at the top of the hump. ♂ F 30 mm.

**pacasa** Williams 1927: ♂ Bolivia: ♂ and genitalia figured. B.M. 5 ♂ Peru (Chanchamayo. San Ramon. Rio Colorado). 3 ♂ Bolivia (Sara, Santa Cruz de la Sierra). 1 ♀ Brazil.

11 (4b). Above brown, thorax and wing bases obscure dull dark green. F hyaline spots pale yellow, as in *harpagus*, but dots or dashes rarely present in spaces 4 and 5. H cilia white, unchequered: termen more crenulate than usual. Tornus lobed. Unf dorsum narrowly whitish on either side of vein 1 and a small suffused spot under the spot in space 1b. Unh a pale yellow lunule in space 1c, no discal band. Cuiller tapered, quite unlike rest of genus. ♂ F 25 mm.

**bridgmani** Weeks 1902: ♂ Cochabamba: figured. Genitalia fig by Williams & Bell 1933.

Synonym. *bolivar* Mabilie 1903: ♂ Bolivia: type B.M. B.M. 1 ♂ Mexico (Guerrero). 5 ♂ Ecuador (Loja. Zamora). 2 ♂ S.E. Peru (Chirimayo. R. Huacamayo). 2 ♂ Bolivia (Cochabamba).

12a (1a). F no central hyaline spots. H lobed. Back of cuiller rounded, top flat, long beak.

12 (13). F with small apical hyaline spots in spaces 9, 8 and a dot in space 7. Above dark brown, thorax and wing bases inconspicuously dark greenish blue. Unf dorsum pale brown. Unh double pale yellow spot in space 1c and traces of a faint, suffused discal band. ♂ F 25 mm.

**nora** nov: ♂ Huacamayo, Carabaya: dry season, June 1904: 3,100 feet: G. Ockenden: type B.M. B.M. Only the type.

13 (12). F spotless. Above black, cilia F narrowly white from dorsum to vein 5: H the white cilia widen towards the tornus, where the entire lobe is white, extending slightly on to the wing. Below entirely dark brown, except

for a broad white border H from the tornus to vein 4 or 5.  
♂ F 26 mm.

**tristis** Draudt 1924: ♂ ? loc: figured (no text). Genitalia fig by Williams & Bell 1934.

Synonym. *albomarginata* Tessmann 1928: ♂ Pozuzo.

B.M. 3 ♂ Peru (Chanchamayo. Perene. Moyabamba).

2 ♂ Bolivia (Sara, Santa Cruz de la Sierra. Yungas, La Paz).

**C.13. URBANUS** Hübner 1807: type *proteus* Linnaeus: fixed by Hemming 1933.

Synonyms. *Goniurus* Hübner 1819: type *proteus* Linnaeus: fixed by Westwood 1852.

*Eudamus* Swainson 1831: type *proteus* Linnaeus: fixed by author.

*Lyroptera* (Hopffer MS) Plötz 1881 = *Eudamus*.

The genus contains the tailed *Pyrginae* which have hooked antennae: the club is slender and the apiculus is sometimes bent right back against the club: nudum 2/18. The genitalia resemble those of *Astraptus* and *Autochton* in having a deeply divided uncus and an undivided gnathos: the clasp alone furnishes evidence of specific identity. Most species have a costal fold upf. The uph is unmarked: the unh has dark markings, consisting of a continuous discal band, and a central band, usually macular, made up of a spot in space 1c, cell spot, and an inner and an outer spot in space 7: in some species these markings are faint or obsolete.

1a (23a). H tail brown.

1b (12a). Above, head, body and wing bases glossed, shining green or blue.

1c (11). F comparatively broad, width (perpendicular from tornus to costa)  $> \frac{1}{2}$  length F.

1d (6a). Unh the central band may be compact or be broken into spots, in which case the cell spot is the largest and is placed generally nearer to the inner than to the outer spot in space 7. Cuiller with a nose that does not project. ♂ F 22 mm.

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1e (4a). ♂ with costal fold.

1 (2a). ♂ uph green colour gradually shaded off, no well-marked broad submarginal band. Cuiller short, no higher than broad, the nose short and rounded, and with no lip below the nose. ♂ upf the spots in space 2 and cell usually separate. Unh dull brown, central spots separated: white edging in space 1c to the discal band faint. Antennae continuously pale yellow below the club and the apiculus. Tail long, ♂ 10, ♀ 13 mm.

**proteus.** 2 sub-species.

(a). ♂ upf with hyaline streaks in spaces 4 and 5, at least represented by a dot over vein 4 and another under vein 6. Cilia F conspicuously chequered up to apex. H more crenulate than usual: chequering of cilia not reaching to the outer edge, causing the border to look much whiter than in other species.

Sub-sp. **proteus** Linnaeus 1758: America: fig by Merian and Clerck. Fig by Cramer: Abbott & Smith: Holland: Hayward 1948 (= *pronta*): Seitz (upperside: underside = *viterboana*). Genitalia fig by Skinner & Williams 1922: Williams 1926: Lindsey, Bell & Williams 1931: the fig by Godman & Salvin is of *alka*.

B.M. 80 ♂ 63 ♀ U.S.A. (California. Florida. Texas. Georgia. Alabama). 12 ♂ 9 ♀ Mexico. 3 ♂ 1 ♀ Guatemala. 3 ♂ 3 ♀ Honduras. 1 ♂ 1 ♀ Nicaragua. 2 ♂ 4 ♀ Costa Rica. 2 ♂ 2 ♀ Panama. 6 ♂ 15 ♀ Colombia. 11 ♂ 22 ♀ Venezuela. 10 ♂ 6 ♀ Trinidad. 1 ♀ Tobago. 3 ♂ 4 ♀ Br Guiana. 2 ♂ 6 ♀ Surinam. 2 ♂ 3 ♀ Ecuador (Paramba. Loja). 5 ♂ 4 ♀ Peru (Lima. Chanchamayo. Huanco. Marcapata. Amazonas. W. of Andes). 5 ♀ Bolivia. 1 ♂ 1 ♀ Iquitos. 5 ♂ 9 ♀ Pará. 1 ♂ Ceara. 1 ♂ 3 ♀ Pernambuco. 2 ♂ 2 ♀ Bahia. 1 ♂ 1 ♀ Maranhão. 2 ♂ 2 ♀ Minas Geraes. 3 ♂ 1 ♀ Matto Grosso. 19 ♂ 21 ♀ S. Brazil (Rio. Parana. São Paulo. Rio Grande. Espírito Santo). 6 ♂ 7 ♀ Paraguay. 25 ♂ 3 ♀ Argentine (1 ♀ is black).

(b). Darker, markings more or less reduced, as well as chequering of cilia.

Sub-sp. **domingo** Scudder 1872: Haiti. Fig Comstock 1934 from Porto Rico.

Synonym. *proteides* Plötz 1881: N. America.



B.M. 2 ♂ 13 ♀ Haiti. 4 ♂ 7 ♀ Cayman Is. 5 ♂ 5 ♀ Barbados. 6 ♂ 6 ♀ Bahamas. 2 ♂ 1 ♀ St Eustatius. 1 ♂ Porto Rico. 1 ♂ St Thomas. 22 ♂ 10 ♀ Dominica. 3 ♂ 8 ♀ St Vincent. 2 ♂ 3 ♀ St Kitts. 5 ♂ 5 ♀ St Lucia. 6 ♂ 3 ♀ Grenada. 3 ♂ 2 ♀ Antigua. 1 ♂ 2 ♀ Montserrat. 2 ♂ 1 ♀ Nevis. 3 ♂ 9 ♀ Martinique. 3 ♂ Guadeloupe. 50 ♂ 38 ♀ Cuba. 30 ♂ 31 ♀ Jamaica (1 ♀ black).

2a (1). ♂ uph green (or blue) colouring sharply limited by a broad dark border. Cuiller isosceles, much higher than broad, the nose rounded or pointed and with a well-defined lip below the nose. Upf without hyaline markings in spaces 4 and 5, but often with a dot above vein 4. Cilia H chequered to outer edge. Antennae, upper part of club darkened, not continuously pale yellow.

2 (3). ♂ tail over 5 mm. long. Unh discal band uniform, not becoming macular at upper end. Cuiller with the lip projecting beyond the nose.

**viterboana.** 3 sub-species.

(a). Above, basal clothing green. ♂ tail 8 mm. Unh typically with the central band unbroken and broadly bifid at its upper end, but very often the spots in space 7 are separated. ♂ upf the spots in space 2 and the cell generally overlap. A very variable form, varying towards *proteus*, *viterboana* and *pronta*. Nose of cuiller pointed.

Sub-sp. **alva** nov: ♂ Mexico, Atoyac, Vera Cruz; May: H. H. Smith: genitalia figured by G & S as *proteus*: type B.M.

B.M. 16 ♂ 6 ♀ Mexico. 3 ♂ 2 ♀ Guatemala. 1 ♂ 1 ♀ Honduras. 1 ♂ Nicaragua. 1 ♀ Salvador. 2 ♂ 1 ♀ Costa Rica. 5 ♂ 4 ♀ Panama. 7 ♂ 2 ♀ Colombia. 3 ♂ 4 ♀ Venezuela. 4 ♂ 2 ♀ Trinidad. 1 ♂ Tobago. 3 ♂ 3 ♀ Br Guiana. 2 ♂ 2 ♀ Surinam. 5 ♂ 6 ♀ Fr Guiana. 3 ♂ 3 ♀ Ecuador (Chimbo. La Chima. Rio Pastaza. Cachabe). 6 ♂ 4 ♀ Peru (Chanchamayo. Marcapata. Cuzco. Carabaya. Ucayali. Rio Colorado). 1 ♂ 3 ♀ Bolivia (Charaplaya. Yungas, La Paz. Buenavista). 1 ♂ 1 ♀ Iquitos. 1 ♂ 1 ♀ Itaituba. 3 ♂ 3 ♀ Pará. 1 ♂ Bahia. 1 ♂ Petropolis. 1 ♂ Argentine (Tucuman).

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(b). Above, basal clothing blue. ♂ tail 10 mm. H termen more convex. Unh the central band unbroken, but may be enlarged or bifid at its upper end. ♂ F typically, spots in space 2 and cell wide apart. Cuiller with straight back: nose rounded.

Sub-sp. **viterboana** Ehrman 1907: ♂ Sacorro, Colombia. Type fig by Holland 1927.

B.M. 3 ♂ 2 ♀ Mexico. 3 ♂ 1 ♀ Guatemala. 12 ♂ 3 ♀ Costa Rica. 2 ♂ 3 ♀ Panama. 5 ♂ 7 ♀ Colombia. 2 ♂ 2 ♀ Venezuela. 1 ♂ Ecuador (Rio Tapo). 4 ♂ 1 ♀ Peru (Chanchamayo. Carabaya. Limbani). 1 ♂ Bolivia (Yungas, La Paz).

(c). Above, basal clothing rather dull green. ♂ tail 10 mm. Unh central band of uniform width throughout. Clasp as *alva*.

Sub-sp. **belli** Hayward 1935: ♀ Argentine. Fig Hayward 1948.

B.M. 1 ♂ Bolivia (Yungas, La Paz). 1 ♂ Argentine (Tucuman).

3 (2). ♂ tail 5 mm. Unh upper part of discal band divided into spots by pale veins. Unh central spots separated. Above, like *alva*, spots in space 2 and cell overlap. Cuiller with a straight back, point sharply pointed and nose protruding beyond the lip. 1 ♂ has the genitalia of *pronus*.

**pronta** nov: ♂ Honduras, San Pedro Sula: Wittkugel: type B.M. Fig Hayward 1948 as *proteus*.

B.M. 6 ♂ 2 ♀ Mexico. 3 ♂ Guatemala. 2 ♂ Honduras. 2 ♂ Costa Rica. 3 ♂ 1 ♀ Panama. 6 ♂ 3 ♀ Colombia. 3 ♂ 1 ♀ Venezuela. 1 ♂ Fr Guiana. 1 ♂ 1 ♀ Upper Putumayo). 1 ♂ Ucayali. 1 ♂ Bahia. 6 ♂ 1 ♀ S. Brazil (Rio. Parana. Novo Friborgo. Santa Catharina). 2 ♂ 1 ♀ Paraguay.

4a (1e). ♂ without a costal fold.

4 (5). Cuiller of clasp produced as in *viterboana*, inner face serrate: no lip below the nose. Above bases green glossed, central spots F separated. Unh uniform pale brown, central spots separated: discal band compact: no white outer edging in space 1c. Tail 10 mm.

**huancavillas** Williams 1926: ♂ Ecuador: figured, also the genitalia.

B.M. 1 ♂ Ecuador (Rio Pastaza, El Topo). 1 ♀ Ecuador (Angamarca).

**5** (4). Cuiller not produced at all, end rounded: upper edge of right clasp somewhat protruding. Superficially as *pronta*, above and below.

**pronus** nov: ♂ Ambato, Ecuador: type B.M.

B.M. 1 ♀ Mexico. 2 ♂ Guatemala. 1 ♀ Costa Rica.

3 ♂ Colombia. 7 ♂ Ecuador (Ambato. Paramba. Chimbo).

6 ♂ Peru (Charape. La Merced. Rio Colorado). 3 ♂ Bolivia (Yungas, La Paz. Santa Cruz de la Sierra).

**6a** (1d). Unh central band consists of well-separated spots, whereof the cell spot is no larger than the others, nor is it placed usually nearer to the inner spot in space 7. Cuiller without the nose of *proteus*, but usually with a process from the inner face.

**6b** (9a). ♂ with a costal fold.

**6** (7a). Upf always with hyaline markings in spaces 4 and 5, sometimes (*platowii*) forming a continuous band connecting the discal and apical spots: spots in space 2 and the cell overlapping: spot in space 1b longer than usual, penetrating the veinlet in mid space 1b: basal clothing brilliant green. Unh ground colour pale brown: outer spot in space 7 always smaller than the inner spot. Antennae continuously pale yellow under the club and the apiculus. Cuiller with a long, narrow, bulbous-ended process. ♂ F 20 mm.: tail 10 mm.

**esmeraldus** Butler 1877: ♂ Villa Nova, Amazons: type B.M. Genitalia fig G & S 1893: Williams 1926: Hayward 1948. Fig by Hayward 1948, pl 15/9 = *esta* ♀.

Synonym. *platowii* Plötz 1881: ? loc. Fig Seitz.

B.M. 5 ♂ 3 ♀ Mexico. 5 ♂ 1 ♀ Guatemala. 3 ♂ Ruatan Is (small and dark). 5 ♂ Honduras. 5 ♂ 2 ♀ Costa Rica.

6 ♂ 3 ♀ Panama. 10 ♂ 13 ♀ Colombia. 3 ♂ 3 ♀ Venezuela.

15 ♂ 4 ♀ Trinidad. 1 ♂ Tobago. 1 ♂ 1 ♀ Br Guiana.

2 ♂ Surinam. 1 ♂ 2 ♀ Fr Guiana. 3 ♂ 2 ♀ Ecuador (Zamora. Loja. Paramba. Quito). 1 ♂ S.E. Peru. 3 ♀

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Bolivia (Buenavista). 13 ♂ 7 ♀ Up Amazons (Iquitos. Teffe. Itaituba. Villa Bella). 7 ♂ 8 ♀ Pará. 1 ♂ Bahia. 2 ♂ 2 ♀ Matto Grosso. 3 ♂ 3 ♀ S. Brazil (Petropolis. Joinville). 1 ♂ Paraguay.

- 7a (6). Upf without hyaline markings in spaces 4 and 5.  
7 (8). ♂ above green colouring extensive, nearly reaching termen H. Unh whitish brown, base green glossed: the discal band conspicuously whiter edged in space 1c, and in ♀ the edging is often continued to the end of the band as a macular post-discal band. Cuiller as in *esmeraldus*, but the projecting process is shorter and stouter. ♂ F 22 mm.: tail ♂ 5 mm., ♀ 10 mm.

**esma** nov: ♂ Obidos: M. de Mathan: type B.M.  
B.M. 1 ♂ Panama. 2 ♀ Colombia (Rio Negro. Choco, Rio Condote). 2 ♀ Br Guiana. 4 ♀ Iquitos. 4 ♂ 3 ♀ Obidos. 1 ♂ Rio Tapajos.

- 8 (7). ♂ above, blue gloss restricted, defined on H by a broad dark border. Unh rather pale purple-brown, pale edging to the discal band faint. Clasps asymmetric: left clasp rounded, as in *promus*: right clasp with a bulbous-ended long process as in *esmeraldus*. ♂ F 21 mm.: tail 5-10 mm.

**evona** nov: ♂ Zapote, Guatemala: Champion: type B.M.  
B.M. 3 ♂ 1 ♀ Mexico. 3 ♂ Guatemala. 1 ♂ 1 ♀ Costa Rica. 2 ♂ 2 ♀ Colombia. 1 ♂ Fr Guiana. 2 ♂ N. Peru (W. of Andes). 1 ♂ Bolivia (Buenavista). 1 ♂ Goyaz. 1 ♀ Rio.

- 9a (6b). ♂ without a costal fold. F no spots in spaces 4 and 5.

9 (10). F spots pale yellow, separated. Unh plain brown, the usual dark markings comparatively faint, looking "washed out": central spots small and narrow. Clasps symmetrical, cuiller with a short, triangular, upturned process. ♂ F 22 mm.: tail 10 mm.

**elmina** nov: ♂ Rio Pastaza, Ecuador: 5,000-7,000 ft.: M. G. Palmer: type B.M.

B.M. 1 ♂ Costa Rica. 24 ♂ 3 ♀ Colombia. 4 ♂ 1 ♀ Venezuela. 37 ♂ 4 ♀ Ecuador (Loja. Ambata. Zamora. Baños).



5 ♂ 2 ♀ N. Peru (R. Tabaconas. Charape). 7 ♂ 2 ♀ Peru (Huancabamba. Marcapata. R. Inambari). 7 ♂ Bolivia (San Jacinto. La Paz. Cochabamba). 1 ♂ Pebas, Up Amazons.

10 (9). F hyaline spots white, more or less separated. Unh pale purple-brown, dark markings conspicuous: spots in space 7 equal. Clasps asymmetrical: left clasp rounded as in *evona* and *pronus*: right clasp with a projecting process as in *elmina*. ♂ F 18 mm.: tail ♂ 8 mm., ♀ 10 mm.

**esta** nov: ♂ Sao Paulo, Alto de Sierra: April 1925: R. Spitz: type B.M. Fig Hayward 1948, ♂ as *acarwoios*, ♀ as *esmeraldus*.

B.M. 8 ♂ 3 ♀ Mexico. 1 ♂ 2 ♀ Guatemala. 3 ♂ 2 ♀ Costa Rica. 2 ♂ 2 ♀ Panama. 6 ♂ 10 ♀ Colombia. 3 ♂ 4 ♀ Venezuela. 5 ♂ 2 ♀ Fr Guiana. 5 ♂ 3 ♀ Ecuador (Loja. Zamora. Paramba. Ambato. Rio Pastaza). 4 ♂ 5 ♀ Peru (Chanchamayo). 1 ♂ S. Peru (Chaquimayo). 3 ♀ Bolivia. 1 ♂ Amazons (St Paulo d'Olivenca). 2 ♂ 2 ♀ Pará. 1 ♂ 1 ♀ Bahia. 1 ♂ 1 ♀ Goyaz. 10 ♂ 6 ♀ S. Brazil (São Paulo. Rio. Tijuco). 2 ♂ Paraguay. 1 ♂ Argentine.

11 (1c). F unusually narrow, width  $< \frac{1}{2}$  length of costa. F cilia plain, not chequered as in previous species. Above green glossed: F markings small and separated. Unh purple-brown, markings small. Antennae continuously yellow under club and apiculus. Cuiller square, inwardly serrate. ♂ F 21 mm.: tail 8 mm. in ♂, 10 mm. ♀.

**acawoios** Williams 1926: ♂ Br Guiana: figured, also genitalia. Genitalia fig Hayward 1948, but pl 15/5 is referable to *esta*.

B.M. 1 ♂ Costa Rica. 1 ♂ Panama. 6 ♂ Colombia. 10 ♂ 10 ♀ Br Guiana. 1 ♂ Surinam. 1 ♀ Fr Guiana. 7 ♂ 5 ♀ Up Amazons (Teffe. Iquitos. St Paulo d'Olivenca). 1 ♂ R. Madeira. 1 ♂ 2 ♀ Pará. 1 ♂ Pernambuco. 1 ♂ Maranh.

12a (1b). Above, head, body and wing bases brown.

12 (13a). Cilia more or less chequered. F central spots separated; no apical spot in space 9. H termen strongly convex. ♂ with a costal fold.

**dorantes.** 5 sub-species.

(a). Tail 10 mm. F markings conspicuous. Unh dark markings prominent on a paler ground. Very variable, but individually rather than sub-specifically. ♂ F 20 mm.

Sub-sp. **dorantes** Stoll 1790: Surinam: figured. Fig Seitz: Holland 1931: Hayward 1948. Genitalia fig G & S: Lindsey, Bell & Williams 1931.

Synonyms. *torones* Hübner 1821: fig Exot Schmett 1: pl 155, fig 1 & 3 (2 & 4 are of *proteus*): name given in index.

*athletes* Felder 1862: ♂ Brazil: type B.M.

*amisus* Hewitson 1867: ♂ Nicaragua: type B.M. Fig Hewitson 1875.

*protillus* Herrich-Schäffer 1869: ? loc. Fig De Silva 1907.

*retractus* Plötz 1881: Venezuela. Fig Williams 1926.

*velinus* Plötz 1881: Bahia. Fig Seitz.

*kefersteini* Plötz 1881: Venezuela.

*rauterbergi* Skinner 1895: ♂ Texas. Fig Williams 1926: Comstock 1927: Holland 1931.

*calafia* Williams 1926: ♂ Lower California: figured.

B.M. 3 ♂ 2 ♀ Texas. 7 ♂ 1 ♀ Arizona. 100 ♂ 34 ♀ Mexico. 180 ♂ 50 ♀ Guatemala. 12 ♂ 6 ♀ Honduras. 10 ♂ 8 ♀ Nicaragua. 1 ♂ Salvador. 20 ♂ 1 ♀ Costa Rica. 13 ♂ 9 ♀ Panama. 100 ♂ 48 ♀ Colombia. 40 ♂ 16 ♀ Venezuela. 120 ♂ 7 ♀ Trinidad. 12 ♂ 9 ♀ Br Guiana. 1 ♂ Surinam. 2 ♂ 3 ♀ Fr Guiana. 30 ♂ 17 ♀ Ecuador. 20 ♂ 16 ♀ Peru. 25 ♂ 16 ♀ Bolivia. 3 ♂ 3 ♀ Up Amazons. 18 ♂ 3 ♀ Pará. 4 ♂ Maranhão. 5 ♀ Ceara. 4 ♂ 2 ♀ Pernambuco. 5 ♂ 1 ♀ Bahia. 3 ♂ 3 ♀ Goyaz. 3 ♂ 2 ♀ Minas Geraes. 5 ♂ 1 ♀ Matto Grosso. 40 ♂ 26 ♀ S. Brazil. 14 ♂ 6 ♀ Paraguay. 30 ♂ 19 ♀ Argentine.

(b). Similar to *dorantes*, but markings F smaller.

Sub-sp. **cramptoni** Comstock 1944: ♂ Porto Rico: figured.

B.M. 1 ♂ 1 ♀ Porto Rico. 4 ♂ St Thomas. 25 ♂ 17 ♀ Haiti.

(c). Tail long, as in *dorantes*. Above markings more reduced. Unh much darker in ♂: ♀ as ♂, grading to a form with a conspicuous broad pale border contrasting with the very dark purple-brown ground colour. ♂ F 21 mm.

Sub-sp. **santiago** Lucas 1857: Cuba. Fig Holland 1916 from the Is des Pins: Seitz.

Synonyms. *cariosa* Butler 1862: Cuba: type B.M.

*corydon* Butler 1870: ♀ Cuba: type B.M. Fig Butler 1890.

*larius* Plötz 1881: Cuba.

B.M. 50 ♂ 40 ♀ Cuba.

(d). Tail short, 6 mm. ♂ upf typically unmarked, but markings often more or less developed in both sexes. Unh dark brown with dark markings. ♂ F 20 mm.

Sub-sp. **obscurus** Hewitson 1867: ♂ Guadeloupe: type B.M.

Synonyms. *brevicaudata* Lathy 1904: ♂ Dominica: type B.M.

*parvus* Skinner 1920: ♂ Martinique. Fig Williams 1926.

B.M. 4 ♂ Antigua. 10 ♂ 7 ♀ St Lucia. 1 ♂ 1 ♀ Montserrat.

1 ♂ 1 ♀ St Eustatius. 3 ♂ Guadeloupe. 6 ♂ Martinique.

42 ♂ 1 ♀ Dominica. 2 ♂ Beguin Is. 17 ♂ 9 ♀ St Vincent.

10 ♂ 4 ♀ Barbados. 9 ♂ St Kitts. 10 ♂ 2 ♀ Grenada.

6 ♀ Grenadines. 3 ♂ 1 ♀ "Venezuela, Caracos".

(e). Tail very short, 4-6 mm. F markings fully developed. Unh purple grey, dark markings strongly contrasting. ♂ F 18 mm.

Sub-sp. **galapagensis** F. X. Williams 1911: ♂ Galapagos Is.

Fig R. C. Williams 1926.

B.M. 13 ♂ 24 ♀ Galapagos Is.

**13a** (12). Cilia unchequered. F usually a spot in space 9.

13b (20a). F spot in space 3, if present, forms part of the narrow central hyaline band.

13c (19). H cilia brown or sullied. ♂ F 21-23 mm.

13d (17a). ♂ without a costal fold. Upf with a continuous central band and some apical spots.

13e (16). Unf plain brown between band and termen.

13f (15). Unh the cell spot placed between the two spots in space 7 and widely separated from them. Clasp with the valva projecting beyond the cuiller.

13 (14). Upf normally with 4 apical spots, rarely a spot in space 5. Upper edge of valva evenly curved from the cuiller and projecting to twice the width of the cuiller.

**teleus** Hübner 1821: ? loc: fig on plate 154 (Exot Schmett 1) as *dorantes*, named as *teleus* in index.

### C.13. URBANUS

Synonyms. *eurycles* Latreille 1824: ♀ Brazil (type in Paris Museum has 4 apical spots). Fig Seitz pl 160e, upper-side = *procne* ♀, underside = *teleus*. Fig Holland 1931 = *tanna*. Correctly fig Hayward 1948, ♂ and genitalia: genitalia by Skinner & Williams 1922 and Lindsey, Bell and Williams 1931. Fig De Silva 1907 = *procne* ♂.

*zalanthus* Plötz 1881: Allagra.

*latipennis* Mabilbe & Vuillot 1891: ♀ Fr Guiana: figured. B.M. 1 ♂ "U.S.A.". 34 ♂ 15 ♀ Mexico. 4 ♂ 2 ♀ Guatemala. 4 ♂ 4 ♀ Honduras. 3 ♂ 1 ♀ Nicaragua. 8 ♂ 4 ♀ Costa Rica. 11 ♂ 1 ♀ Panama. 67 ♂ 28 ♀ Colombia. 19 ♂ 17 ♀ Venezuela. 7 ♂ 1 ♀ Trinidad. 2 ♂ 1 ♀ Tobago. 1 ♂ Jamaica. 6 ♂ 8 ♀ Br Guiana. 8 ♂ 2 ♀ Surinam. 8 ♂ 12 ♀ Fr Guiana. 31 ♂ 9 ♀ Ecuador. 37 ♂ 4 ♀ Peru. 26 ♂ 3 ♀ Bolivia. 28 ♂ 3 ♀ Up Amazons. 22 ♂ 8 ♀ Pará. 3 ♂ Bahia. 2 ♂ 1 ♀ Pernambuco. 3 ♂ Maranhão. 5 ♂ 5 ♀ Minas Geraes. 7 ♂ Matto Grosso. 48 ♂ 33 ♀ S. Brazil. 17 ♂ 8 ♀ Paraguay. 15 ♂ 1 ♀ Argentine.

- 14 (13). Upf usually with 5 apical spots, an extra spot in space 5. Valva angled shortly after its junction with the cuiller and extension only  $1\frac{1}{2}$  times width of cuiller. Otherwise as *teleus*.

**tanna** nov: ♂ Santa Rita, Colombia, Cauca River: Paine & Brinkley: type B.M. Fig Holland as *eurycles*.

B.M. 1 ♂ 1 ♀ "U.S.A.". 6 ♂ 2 ♀ Mexico. 2 ♂ 3 ♀ Guatemala. 3 ♂ 2 ♀ Honduras. 1 ♀ Salvador. 3 ♂ 2 ♀ Nicaragua. 4 ♂ 5 ♀ Costa Rica. 11 ♂ 6 ♀ Panama. 37 ♂ 30 ♀ Colombia. 13 ♂ 21 ♀ Venezuela. 20 ♂ 23 ♀ Trinidad. 1 ♀ Jamaica. 2 ♂ 4 ♀ Br Guiana. 1 ♂ Surinam. 2 ♀ Fr Guiana. 15 ♂ 8 ♀ Ecuador (Paramba. Chimbo. Loja. Cachabe, flying with *teleus*).

- 15 (13f). Unh the cell spot is conjoined (or nearly so) to the outer spot in space 7. Valva of clasp not projecting beyond the cuiller. Upf typically with the central band very slender and the dot in space 1b detached: no apical spot in space 5 and the spot in space 9 is minute. Very variable and the markings upf may be as strongly marked as in *tanna* or almost obsolete as in *simplicius*.



**cindra** nov: ♂ E. Bolivia, Buenavista: 750 metres: Aug 1906 to April 1907: Steinbach: type B.M.

B.M. 4 ♂ 3 ♀ Colombia (Muzo). 1 ♀ Venezuela. 2 ♂ 1 ♀ Br Guiana. 1 ♀ N. Peru (R. Tabaconas). 16 ♂ 1 ♀ Bolivia (La Paz. Chiquitos. Santa Cruz. Buenavista. Coroico). 1 ♂ Santarem. 1 ♂ 1 ♀ Bahia. 2 ♂ 1 ♀ Minas Geraes. 1 ♂ 1 ♀ Itaparica. 1 ♂ "Brazil".

**16** (13c). Unf broadly and conspicuously paler brown between the central band and the termen. Upf central white band not extending below vein 2: usually apical spots only in spaces 7, 8 and 9; if a spot is present in space 6, it is out of line, nearer to the termen. Unh chestnut, dark markings broad: spot in cell adjoining or conjoined to the outer spot in space 7.

**zagorus** Plötz 1881: Allagra: type Berlin Mus and MS figure of it in B.M.

Synonym. *purpurata* Hayward 1933: ♀ Argentine: figured. Fig Hayward 1948, ♂ and genitalia.

B.M. 4 ♂ 3 ♀ S. Brazil (Parana. Rio Grande do Sul).

**17a** (13d). ♂ with a costal fold. Upf markings sullied, reduced.

17 (18). Unh the central cell spot conjoined to the outer spot in space 7. Unf a dark smudge about the apical spots. Spine of cuiller single, as usual. ♂ varies from an unmarked form with rounded wings (*simplicius* and *gracill-cauda*) to a form with pointed wings and better marked on upf (*pilatus*). Upf spot in space 3, if present, slightly out of line.

**simplicius** Stoll 1790: ? loc: figured. Fig Holland 1931: Seitz upperside (underside = *procne*): Hayward 1948 = *procne*. Genitalia fig G & S: Lindsey, Bell & Williams 1931.

Synonyms. *gracillcauda* Plötz 1881: C. America. Fig Seitz.

*pilatus* Plötz 1881: Bahia: type Berlin Mus and MS figure of it in B.M.

*thiemei* and *borja* Ehrman 1907: ♂ Honduras and ♂ Bolivia: *fide* Holland 1927 = *simplicius*.

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B.M. 25 ♂ 12 ♀ Mexico. 6 ♂ Guatemala. 16 ♂ 3 ♀ Honduras. 3 ♂ Nicaragua. 1 ♂ Salvador. 4 ♂ 3 ♀ Costa Rica. 12 ♂ 7 ♀ Panama. 25 ♂ 12 ♀ Colombia. 35 ♂ 20 ♀ Venezuela. 10 ♂ 8 ♀ Trinidad. 2 ♂ 2 ♀ Tobago. 25 ♂ 9 ♀ Br Guiana. 2 ♂ 3 ♀ Surinam. 5 ♂ 4 ♀ Fr Guiana. 20 ♂ 14 ♀ Ecuador. 14 ♂ 4 ♀ Peru. 10 ♂ 5 ♀ Bolivia. 8 ♂ 3 ♀ Up Amazons. 16 ♂ 13 ♀ Pará. 11 ♂ 3 ♀ N. & Mid Brazil, Bahia to Matto Grosso. 20 ♂ 8 ♀ S. Brazil. 16 ♂ 7 ♀ Paraguay. 1 ♂ Argentine.

**18** (17). Unh the central cell spot lies between the two spots in space 7 and is widely separated from them. Spine of cuiller double. ♂ upf markings generally obscure; in ♀ the central band may be as in *teleus*, but the spot in space 1b, if present, is shifted out of line: the spot in space 3, if present, is not shifted out of line as in *simplicius*.

**procne** Plötz 1881: Brazil. B.M. have a ♂ from Theresopolis compared with Plötz's original MS figure. Fig Seitz ♂ as *simplicius* underside and ♀ as *eurycles* upperside: Hayward 1948 as *simplicius*.

B.M. 2 ♂ 2 ♀ Texas. 1 ♂ Arizona. 35 ♂ 7 ♀ Mexico. 7 ♂ 1 ♀ Guatemala. 10 ♂ 2 ♀ Honduras. 15 ♂ 5 ♀ Nicaragua. 12 ♂ 3 ♀ Costa Rica. 2 ♂ 1 ♀ Panama. 20 ♂ 9 ♀ Colombia. 7 ♂ 4 ♀ Venezuela. 1 ♂ Trinidad. 3 ♂ 4 ♀ Br Guiana. 3 ♂ 5 ♀ Surinam. 4 ♂ 2 ♀ Fr Guiana. 7 ♂ 1 ♀ Ecuador. 19 ♂ 3 ♀ Peru. 8 ♂ 2 ♀ Pará. 1 ♂ Manicore. 1 ♂ 1 ♀ Pernambuco. 1 ♂ 1 ♀ Bahia. 4 ♂ Minas Geraes. 5 ♂ Matto Grosso. 17 ♂ 19 ♀ S. Brazil. 4 ♂ 3 ♀ Paraguay. 3 ♂ Argentine.

**19** (13c). H cilia conspicuously white: unh termen before cilia as broadly white as the cilia and corresponding area uph is conspicuously chequered, but not the cilia. Upf with a continuous discal band, inwardly irregular: 3 apical dots and one in space 9. ♂ F 18 mm.: no costal fold. Tail long.

**evenus** Ménétrières 1855: Brazil: figured. Fig Seitz: Mabille & Vuillot 1891: Hayward 1948: genitalia by Hayward 1948. B.M. 3 ♂ 1 ♀ Goyaz. 3 ♂ 3 ♀ Minas Geraes. 8 ♂ 3 ♀ S. Brazil. 1 ♂ Argentine.

**20a** (13b). F spot in space 3 not forming part of central band, detached or absent. ♂ with costal fold: F 23 mm. 20b (22). Unh termen before cilia not white. Tail 4 mm. 20 (21). F central spots small, spot in space 3 separated.

**athesis** Hewitson 1867: ♂ Venezuela: type B.M. Fig Hewitson 1875.

Synonyms. *cenis* Herrich-Schäffer 1869: ? loc. Fig Butler 1874: Seitz.

*motilones* Williams 1926: ♂ Venezuela: figured and genitalia.

B.M. 1 ♂ 3 ♀ Panama. 1 ♂ Colombia. 7 ♂ 4 ♀ Venezuela. 1 ♀ Tobago.

**21** (20). F central spots large, spot in space 3 conjoined to the spot in space 2: spots in 1b, 2 and cell conjoined.

**miltas** Godman & Salvin 1893: ♂ Orizaba, Mexico: type B.M. Fig Seitz.

B.M. 1 ♂ Mexico (type). 1 ♂ Jalapa, Mexico, in coll Schaus.

**22** (20b). Unh termen narrowly white before termen. F central spots in a continuous band.

**carmelita**. 3 sub-species.

(a). F with 5 apical spots in line: central band compact. Unh cilia white in continuation of the narrow white band along the termen. Tail 7 mm.

Sub-sp. **trebia** Möschler 1878: ♀ Venezuela. Fig Seitz.

Synonym. *nigricauda* Godman & Salvin 1893: ♂ Chiriqui: type B.M. Genitalia fig Williams & Bell 1933.

B.M. 1 ♀ Nicaragua. 2 ♂ 1 ♀ Panama. 2 ♂ 2 ♀ Colombia. 1 ♀ Trinidad.

(b). F with only 4 apical spots and the spot in space 6 out of line. Unh cilia sullied and separated by a narrow dark line from the white band along the termen, which band is narrow and nearly macular. F central band irregular. Tail 7 mm.

Sub-sp. **carmelita** Herrich-Schäffer 1869: ? loc. Fig Seitz, but the unh is not greenish as shown.

Synonym. *clevas* Mabille 1888: ♀ Brazil: figured.

B.M. 9 ♂ 14 ♀ Pará. 1 ♂ 1 ♀ Pernambuco.

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(c). F no apical spots and no spot in space 3: band regular, as in *trebia*. Unh the white band along the termen is very narrow and only present along the apical half of the termen, and is there continuous with the cilia as in *trebia*. Tail very short, 4 mm. Cuiller narrow.

Sub-sp. **barra** nov: ♂ Bahia: type B.M.

B.M. Only the type. May prove to be a species.

**23a** (1a). H tail white. ♂ with costal fold.

23b (27a). Above, head, thorax and wing bases brown.

♂ F 22-23 mm.

23c (26). Uph inner edge of the white tornal area inwardly deeply indented V-wise on either side of vein 1b: tail entirely white. Cuiller of clasp with the serrate portion < half the width of the top of the cuiller.

23 (24. 25). Upf unmarked except for 2 small apical spots. Uph tornal white area ends at vein 3, the white cilia extending to vein 6,  $1\frac{1}{2}$  mm. wide in ♂ to 1 mm. in ♀: tail short, 3 mm.

**chales** Godman & Salvin 1893: ♂ Mexico: figured: type B.M. Fig Seitz: genitalia fig by Williams 1926.

B.M. 4 ♂ 2 ♀ Mexico, Guerrero.

**24** (23. 25). Upf central band broken up: a small upper cell spot, a streak across space 2, ending well beyond the origin of vein 3, a narrow detached dash in space 3 and a widely detached dot in space 1b. Uph the white tornal area broad, 4 mm., ending at vein 4 and the white cilia continuing to vein 5. Unf dorsum whitish. Tail broad and short,  $3\frac{1}{2}$  mm.

**reductus** Riley 1919: ♂ Rio Purus, Brazil: type B.M.

B.M. 3 ♂ Fr Guiana. 1 ♂ R. Purus. 1 ♂ Éga, Amazons. 1 ♂ Maranham.

**25** (23. 24). Upf central band continuous, as usual, but liable to be interrupted or absent in individuals.

**doryssus**. 2 sub-species.

(a). Uph white tornal area generally broad, 4 mm., ending at vein 4 and cilia white to vein 5. Tail broad, 4 mm. long.



Sub-sp. **doryssus** Swainson 1831: ♀ Bahia: figured. Figured Seitz: Westwood 1837 and Drury 1782 as *orion*. Genitalia fig by Williams 1926.

Synonyms. *brachius* Hübner 1832: Brazil: figured. Fig. Seitz.

*leucites* Mabilite 1888: ♀ Colombia: figured.

*cleopatra* Ehrman 1907: ♂ Venezuela. *Fide* Holland 1927.

*interruptus* Williams 1926: ♂ Honduras.

B.M. 3 ♂ Mexico. 4 ♂ 4 ♀ Guatemala. 3 ♂ Honduras.

2 ♂ 4 ♀ Nicaragua. 2 ♂ Costa Rica. 6 ♂ 3 ♀ Panama.

8 ♂ 10 ♀ Colombia. 6 ♂ 3 ♀ Venezuela. 7 ♂ 2 ♀ Trinidad.

8 ♂ 9 ♀ Br Guiana. 12 ♂ 6 ♀ Fr Guiana. 4 ♂ 4 ♀ Surinam.

1 ♂ Ecuador (Quito). 1 ♂ 2 ♀ Peru (Rio Colorado). 5 ♂ 2 ♀

Bolivia. 12 ♂ 7 ♀ Up Amazons. 12 ♂ 6 ♀ Mid Amazons.

19 ♂ 12 ♀ Pará. 1 ♂ Maranhão. 1 ♂ Pernambuco. 1 ♂ 1 ♀

Goyaz. 1 ♀ Matto Grosso.

(b). Uph ternal white area narrow, 2 mm., cilia white to vein 6. Tail longer, 5 mm., and narrower. F central band narrower, tending to be obsolete.

Sub-sp. **albicuspis** Herrich-Schäffer 1869: ? loc. Fig Seitz (agrees with a specimen from Parana): Hayward 1948 as *dorysses*.

Synonyms. *nivosus* Plötz 1881: Blumenau.

*loxo* Mabilite 1904: ♀ Santa Catharina: type B.M.

*tenuis* Williams 1926: ♂ Rio de Janeiro.

B.M. 4 ♂ Bahia (ex coll Fruhstorfer, probably from Rio).

3 ♀ Minas Geraes. 24 ♂ 21 ♀ S. Brazil (Rio. São Paulo.

Parana. Espirito Santo. Santa Catharina. Novo Friburgo).

4 ♂ 5 ♀ Paraguay. 4 ♂ 2 ♀ Argentine.

**26** (23c). Uph inner edge of the white ternal area not indented at vein 1b in ♂: tail more or less darkened along vein 1b, at least on unh. Serrate part of cuiller at least half as long at the top of the cuiller.

**albimargo**. 3 sub-species.

(a). Unh more than half the tail is brown. Tail narrow, tapered, 6 mm. long. Uph cilia only white, extending up to vein 5. Cuiller broad, not crested.

Sub-sp. **albimargo** Mabilite 1875: ♂ Colombia: type B.M. Fig Mabilite & Vuillot 1891: Seitz: genitalia, Williams 1926.

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Synonyms. *dominicus* Plötz 1886: ? loc. *Fide* Seitz.  
*triptolemus* Ehrman 1907: ♀ Costa Rica. *Fide* Holland 1927.  
 B.M. 2 ♂ Guatemala. 1 ♂ 2 ♀ Honduras. 2 ♂ Costa Rica.  
 2 ♂ Panama. 6 ♂ 2 ♀ Colombia. 4 ♂ 2 ♀ Venezuela.  
 11 ♂ 10 ♀ Ecuador, Paramba.

(b). Unh  $\frac{1}{3}$  to  $\frac{1}{2}$  of tail brown. Tail broader, 5 mm. long.  
 Uph termen narrowly white as far as vein 4 and often  
 a white spot also in space 5. Wings broader and upf  
 markings wider. Cuiller crested.

Sub-sp. **takuta** nov: ♂ Takutu River, British Guiana: H.  
 Whitely: type B.M.

B.M. 20 ♂ 16 ♀ Br Guiana. 1 ♂ 2 ♀ Surinam. 1 ♂ 4 ♀ Fr  
 Guiana. 1 ♂ Jamaica. 4 ♂ 1 ♀ Ecuador (R. Napo. R.  
 Pastaza. Archidona. Gualaquiza). 3 ♂ Peru (Loreto.  
 Ucayali). 3 ♂ Bolivia (Chulumani). 6 ♂ 1 ♀ Up Amazons  
 (St Paulo d'Olivencia. Iquitos. Ega. Obidos).

(c). Resembles *albimargo*. Uph white cilia extending to  
 vein 6, before which the termen is angled. Tail 6 mm.,  
 darkened as in *albimargo* in ♂, ♀ more like *takuta*. Cuiller  
 narrower than in *albimargo*.

Sub-sp. **rica** nov: ♂ Paraguay, Sapucay, Villa Rica: Nov  
 1902: Foster: type B.M. Fig Hayward 1948 as *albimargo*.  
 B.M. 2 ♂ Amazons (Obidos. Santarem). 1 ♂ Minas  
 Geraes. 14 ♂ 6 ♀ S. Brazil (Petropolis. Espirito Santo.  
 Sao Paulo. Parana. Rio. Rio Grande). 8 ♂ 2 ♀ Paraguay.

**27a** (23b). Above head, thorax and wing bases green.

27 (28). Uph tail short, 5 mm., and white area along  
 termen narrow. ♂ F 21 mm.

**virescens** Mabilie 1877: ♂ Fr Guiana: type B.M. Fig  
 Mabilie & Vuillot 1891: genitalia by Williams 1926:  
 Hayward 1948, ♂ and genitalia.

Synonyms. *herophilus* Plötz 1881: Rio. Fig Seitz.

*chlorothrix* Röber 1925: ♂ Peru.

B.M. 1 ♂ Panama. 1 ♂ 1 ♀ Colombia. 1 ♂ Venezuela.  
 2 ♂ 1 ♀ Br Guiana. 7 ♂ 4 ♀ Fr Guiana. 4 ♂ Ecuador  
 (Zamora. Archidona). 13 ♂ 2 ♀ Peru (La Merced. Chan-  
 chamayo. Perene. Ucayali. Rio Colorado). 3 ♂ 2 ♀  
 Bolivia (Santa Cruz). 2 ♂ 2 ♀ Amazons (Pará. Itaituba.  
 Iquitos. Anna R.). 2 ♂ 4 ♀ Bahia. 1 ♂ Minas Geraes.

1 ♂ Matto Grosso. 29 ♂ 8 ♀ S. Brazil (Parana. São Paulo. Rio. Espirito Santo. Rio Grande). 2 ♂ 1 ♀ Paraguay.

28 (27). Uph tail long, 10 mm. and white area along termen broad, 4 mm. ♂ F 24 mm.

**chalco** Hübner 1823: Brazil: figured. Fig Seitz: Staudinger 1888: genitalia by Williams 1926 and Godman & Salvin: Hayward 1948, ♂ and genitalia.

Synonym. *agesilaus* Swainson 1831: ♂ Bahia.

B.M. 1 ♀ Costa Rica. 17 ♂ 10 ♀ Panama. 3 ♂ 4 ♀ Colombia.

2 ♂ 4 ♀ Venezuela. 2 ♂ Peru (La Merced. Chanchamayo).

3 ♂ Bolivia (La Paz. Buenavista). 2 ♂ Santarem. 7 ♂ 6 ♀

Pará. 3 ♂ 1 ♀ Bahia. 2 ♂ 2 ♀ Minas Geraes. 16 ♂ 8 ♀ S.

Brazil (Parana). 1 ♂ Paraguay.

**C.14. ASTRAPTES** Hübner 1819: type *narcosius* Stoll: selected by Scudder 1875 as *aulestes* Cramer, which is a homonym by Cramer 1777 and is replaced by *narcosius*.

Synonyms. *Telegonus* Hübner 1819: type *talus* Cramer: fixed by Butler 1870.

*Creteus* Westwood 1852: type *creteus* Stoll: by tautonymy.

*Euthymele* Mabilie 1878: type *fulgurator* Walch: fixed by Lindsey 1925 as *mercatus* Fabricius, a synonym of *fulgurator*.

Similar to *Urbanus* in respect of venation, antennae, palpi, legs and form of genitalia: differing in the absence of a tail and the broader hindwing.

1a (13a). F with hyaline apical spots. ♂ with costal fold.

1b (12). F with a central hyaline band.

1c (9a). H termen even and F apex rounded.

1 (2a). Above, head, thorax, base F and most of H green. Below palpi and wing bases green. F spots pale yellow.

♂ F 26 mm.

**talus** Cramer 1777: Surinam: figured. Fig Seitz. Genitalia fig by G & S and Williams 1927.

Synonyms. *ausonius* Latreille 1824: Brazil.

*lucidator* Sepp 1848: ♀ Surinam: figured.

*sumadue* Lucas 1857: Cuba.

*virens* Röber 1925: ♂ Santa Catharina.



C.14. ASTRAPTES

B.M. 2 ♂ 2 ♀ Mexico. 2 ♂ 2 ♀ Guatemala. 1 ♂ Honduras. 1 ♀ Nicaragua. 4 ♂ 5 ♀ Costa Rica. 1 ♀ Panama. 3 ♂ 3 ♀ Colombia. 1 ♂ 2 ♀ Venezuela. 2 ♂ Trinidad. 15 ♂ 10 ♀ Br Guiana. 1 ♂ 1 ♀ Fr Guiana. 9 ♂ 1 ♀ Peru. 2 ♂ 1 ♀ Bolivia. 11 ♂ 11 ♀ Up Amazons. 12 ♂ 10 ♀ Pará. 1 ♂ 1 ♀ Pernambuco. 15 ♂ 11 ♀ S. Brazil. 1 ♂ 1 ♀ Porto Rico. 1 ♂ 1 ♀ St Vincent. 7 ♂ 9 ♀ Haiti. 12 ♂ 9 ♀ Cuba.

2a (1). Above, head, thorax and wing bases blue. F spots white.

2b (8). Below, palpi and pectus pale yellow or whitish.

2 (3a). Unh base costa white. Unf base costa and cell blue glossed.

**fulgurator.** 2 sub-species.

(a). Above, bases blue or violet blue. Very variable. H termen straight or convex. Uph and below, dark to pale brown. F central band usually compact, spot in space 3 present or absent: usually 4 apical spots, but may be 3 or 5: cilia in space 1b brown or white. Unf with or without white suffusion in space 1b about the hyaline discal spot. Unh the white basal streak may be short and broad or long and narrow: the black streak at extreme base of costa may be conspicuous or absent. ♂ F 27 mm.

Sub-sp. **azul** Reakirt 1866: Mexico. Fig Seitz as *fulgurator*.  
Synonyms. *misitra* Plötz 1881: Mexico.

*albifasciatus* Röber 1925: ♂ Rio Songo, Bolivia.

B.M. 16 ♂ 30 ♀ Mexico. 18 ♂ 13 ♀ Guatemala. 16 ♂ 9 ♀ Honduras. 11 ♂ 6 ♀ Nicaragua. 10 ♂ 11 ♀ Costa Rica. 12 ♂ 14 ♀ Panama. 36 ♂ 35 ♀ Colombia. 14 ♂ 10 ♀ Venezuela. 29 ♂ 30 ♀ Ecuador. 8 ♂ 4 ♀ Peru. 13 ♂ 18 ♀ Bolivia.

(b). Above, bases greenish blue. Very constant. H termen convex. Uph and below, dark brown. F central band dislocated at vein 3 and spot in space 2 not conjoined to the cell spot: usually 3 apical spots in ♂, 4 in ♀: cilia in space 1b white. Unf white suffusion in space 1b broad. Unh white basal streak short and broad, and the black streak at extreme base present. ♂ F 26 mm.

Sub-sp. **fulgurator** Walch 1775: ? loc: figured. Fig in Seitz = *azul* and fig of *enotrus* upperside = *fulgurator*. Fig



Cramer pl 284 ♂: Hayward 1948 ♂ ♀ and genitalia. Genitalia fig by G & S.

Synonyms. *mercatus* Fabricius 1793: ? loc.

*fulminator* Sepp 1848: ♀ Surinam: figured.

B.M. 7 ♂ 5 ♀ Trinidad. 15 ♂ 12 ♀ Br Guiana. 7 ♂ 6 ♀ Surinam. 20 ♂ 24 ♀ Fr Guiana. 6 ♂ 8 ♀ Peru (Amazonas). 108 ♂ 56 ♀ Amazons. 3 ♂ 12 ♀ N. Brazil. 43 ♂ 35 ♀ S. Brazil. 13 ♂ 12 ♀ Paraguay. 2 ♂ Argentine.

3a (2). Unf no white streak at base of costa.

3b (5a). Below, basal area not paler. Upf spot in space 3 against the spot in space 2. H termen not excavate above the end of vein 1b. Clasp like *fulgerator*.

3 (4). Unh with a small yellowish cell spot and the outer third of the wing conspicuously paler brown, sparsely overlaid with olive scales, no trace of dark bands. F as *fulgerator*, but the apical spots are irregular and unf with conspicuous white suffusion in space 1b, also with narrow blue suffusion mid cell. ♂ F 25 mm.

**fulgor** Hayward 1938: ♂ Argentine. Fig Hayward 1948.

The fig in Seitz of *enotrus* underside probably = *fulgor*.

B.M. 1 ♂ no loc (lacks spot in space 3 upf).

4 (3). Unh uniform dark brown with conspicuous yellowish cell spot and a discal row, often preceded by paler and more sharply marked inner discal spots in spaces 3, 4 and 6. ♂ F 26 mm.

**naxos** Hewitson 1867: ♂ Brazil: type B.M. Fig Hewitson 1873: fig in Seitz = *tucuti*: genitalia fig Williams and Bell 1933.

Synonym. *subfasciatus* Röber 1925: ♂ São Paulo.

B.M. 38 ♂ 7 ♀ S. Brazil (Rio. Parana. São Paulo. Petropolis).

5a (3b). Below, basal area paler.

5b (7). F spot in space 3 is a narrow streak widely separated from the spot in space 2. H produced and termen concave before the end of vein 1b.

5 (6). H no tail in ♂, 2 mm. in ♀. Unh with a yellow spot in cell and a narrow, broken discal line. ♂ unf without,

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♀ with, white suffusion in space 1b. ♂ F 27 mm. Genitalia as *fuligator*.

**tucuti** Williams 1927: ♂ Panama: figured ♂ and genitalia. B.M. 1 ♂ Guatemala. 1 ♂ Nicaragua. 1 ♂ Costa Rica. 1 ♂ Colombia. 3 ♀ Peru (Chanchamayo. Ucayali). 1 ♂ Bolivia. 1 ♂ Brazil.

6 (5). H ♂ tail 3 mm., ♀ 5 mm. Unh faint indications of a central and a discal dark band. Unf no white suffusion in space 1b. ♂ F 25 mm.

**talhybius** Mabille 1888: ♀ Brazil: type B.M.: figured. Synonym. *eniopus* Godman & Salvin 1893: ♂ Nicaragua: type B.M.: figured. B.M. 1 ♂ Honduras. 1 ♀ Guatemala. 1 ♂ Nicaragua.

7 (5b). ♀ F spot in space 3 contiguous to the spot in space 2. H termen rounded. Unf no white suffusion in space 1b. Below, basal scaling ochreous: unf base of costa blue glossed: unh vestigial dark bands and a dark spot in space 7 on the pale basal area. ♀ F 24 mm.

**palliolum** Druce 1908: ♀ Costa Rica: figured. B.M. Only the type.

8 (2b). Below, palpi and pectus brown. H termen excavate before tornus. Unh with dark bands and spots as in *Urbanus proteus* and its allies, to which species it seems to be closer than to any *Astraptes* species. ♂ F 22 mm.

**egregius**. 2 sub-species.

(a). Upf spots small and tend to obsolescence (3 ♂ B.M. are spotless). Unh termen narrowly yellowish white, suffused, and cilia sullied: dark bands broad and continuous.

Sub-sp. **egregius** Butler 1870: ♂ ? loc: type B.M. Fig Butler 1874: Seitz: genitalia by Williams 1927.

Synonym. *brevicauda* Plötz 1886: Chiriqui. Fig Seitz. B.M. 9 ♂ 1 ♀ Mexico. 3 ♂ 1 ♀ Guatemala. 1 ♀ Honduras. 6 ♂ Nicaragua. 2 ♀ Costa Rica. 7 ♂ 2 ♀ Panama. 7 ♂ 2 ♀ Colombia. 1 ♂ Venezuela. 1 ♂ Amazons.

(b). Upf spots conspicuous. Unh uniform ochreous brown, dark markings conspicuous. Cilia uph white.

Sub-sp. **coxeyi** Williams 1931: ♂ Ecuador: figured ♂ and genitalia.

B.M. 8 ♂ 6 ♀ Paramba, Ecuador.

9a (1c). H termen crenulate, excavate in space 7: F falcate. H with a very short tail. Palpi below, grey.

9 (10a). Unf no white suffusion in space 1b. ♂ F with 3 faint apical spots, one of which (space 7) is hyaline: ♂ without, ♀ with, a discal spot in space 1b. Unh variegated black, white and ochreous. Cilia F and H conspicuously chequered. ♂ F 21 mm.

**erycina** Plötz 1881: ♂ Brazil. Fig Hayward 1948, ♂ and genitalia: Seitz fig = *anthius*.

B.M. 1 ♀ Parana. 1 ♂ Argentine.

10a (9). Unf with conspicuous white suffusion in space 1b: single hyaline spot in space 8. Unh variegated black and grey. Cilia H inconspicuously chequered: on F white only in space 1b.

10 (11). F spot in cell square, in space 2 rhomboidal. Above gloss greenish blue. End of cuiller very narrow. Small, ♂ F 19 mm.

**halesius** Hewitson 1877: ♂ French Guiana.

B.M. Only the type.

11 (10). F spots in cell and space 2 elongate and oblique. Above, gloss brilliant blue. End of cuiller very broad. ♂ F 26 mm.

**anthius** Mabilie 1891: ♂ Hunyabamba. Fig Seitz as *erycina*.

B.M. 1 ♂ Ecuador (Zamora). 2 ♂ Peru (Perene. Oxapampa). 1 ♂ Bolivia (Cochabamba).

12 (1b). F no central hyaline band (present in 1 ♀ B.M.). Above brown, tornus and cilia H yellow (rarely whitish). Below with dark bands. Superficially resembles *anaphus* and *Typhedanus ampyx*, except for the 3 hyaline apical spots F (in spaces 7, 8 and 9) and the dark discal band unf, which is directed to the dark cell spot: in *anaphus* it is parallel to the dark central band and in *ampyx* it is directed to the dark apical spots. ♂ F 23 mm.

**phalaecus** Godman & Salvin 1893: ♂ Mexico: type B.M.: figured and genitalia. Genitalia fig by Williams 1927. B.M. 3 ♂ 2 ♀ Mexico. 5 ♂ 1 ♀ Guatemala. 1 ♂ 2 ♀ Honduras. 4 ♂ Costa Rica. 2 ♂ Colombia.

**13a** (1a). F without apical spots.

13b (22a). F with a central band of irregularly placed hyaline spots.

13c (17a). Unf with conspicuous white suffusion in space 1b.

13 (14a). Below palpi and wing bases more or less green. ♂ without a costal fold. F central band wide and more compact than usual, spot in space 1b large and more or less completely overlapped by the spot in space 2. ♂ F 30 mm. Clasp of the *fuligator* type.

**apastus**. 2 sub-species.

(a). Below, outwardly not paler.

Sub-sp. **apastus** Cramer 1777: Surinam: figured. Fig in Seitz probably = *granadensis*. Genitalia fig by G & S. Synonym. *briccius* Plötz 1881: S. America. Fig Seitz. B.M. 1 ♂ Nicaragua. 2 ♂ Costa Rica. 4 ♂ 2 ♀ Panama. 2 ♂ 3 ♀ Colombia. 3 ♂ 1 ♀ Trinidad. 2 ♂ 1 ♀ Br Guiana. 1 ♂ 1 ♀ Surinam. 7 ♂ 6 ♀ Fr Guiana. 9 ♂ 11 ♀ Up Amazons. 3 ♂ 9 ♀ Pará. 1 ♀ Maranham.

(b). Below, margins broadly grey.

Sub-sp. **pusa** nov: ♂ Bahia: type B.M. (ex coll Felder). Fig Hayward 1948, ♂ as *parisi* (not the genitalia fig).

B.M. 2 ♂ Bahia. 1 ♂ 1 ♀ Minas Geraes. 6 ♂ 9 ♀ S. Brazil.

**14a** (13). Below palpi grey or pale brown; wing bases not green, ♂ with costal fold. F spot in space 1b only partially overlapped by the spot in space 2.

14 (15a). F apex truncate and termen concave below vein 4. Cilia plain brown. Unh with a conspicuous rounded, dark-centred, yellow spot mid space 1c: other markings small and inconspicuous. ♂ F 23 mm.

**fulviluna** Mabilie 1888: Brazil: figured. Fig G & S: Hayward 1948 as *enotrus*: genitalia by Williams 1927 as *aulus*. B.M. 3 ♂ 1 ♀ Panama. 1 ♂ Peru (Tarapote). 2 ♂ 1 ♀ Up Amazons. 10 ♂ 5 ♀ S. Brazil (Parana). 3 ♂ 7 ♀ Paraguay. 1 ♀ Argentine.



**15a** (14). F apex more rounded and termen not concave. Cilia H chequered: F white only in space 1b. Unh markings of the same type, but the spot mid space 1b is inconspicuous.

15 (16). Above, bases shining greenish blue. Unf apex and all unh dark ochreous brown with sparse yellow scaling. Unh cell spot and some of the discal markings white, no submarginal grey scaling. ♂ F 25 mm.

**enotrus** Stoll 1781: ? loc: figured. Figs in Seitz = *fulgenerator* and *fulgor*. Fig by Hayward 1948 = *fulviluna*. Genitalia fig by G & S and Williams 1927.

Synonym. *aulus* Plötz 1881: Brazil. Fig by Seitz is not recognisable. Godman 1907 determined Plötz's MS fig of ♂ as *enotrus*. Genitalia fig by Williams 1927 = *fulviluna*.

B.M. 1 ♂ Mexico. 1 ♂ 1 ♀ Guatemala. 1 ♂ Honduras. 1 ♀ Nicaragua. 1 ♂ Panama. 1 ♂ 6 ♀ Colombia. 1 ♂ 1 ♀ Venezuela. 3 ♂ 1 ♀ Trinidad. 1 ♂ 1 ♀ Br Guiana. 3 ♂ 4 ♀ Fr Guiana. 1 ♂ Bolivia. 3 ♂ 1 ♀ Amazons. 6 ♂ 5 ♀ Pará. 10 ♂ 10 ♀ S. Brazil. 3 ♂ 2 ♀ Paraguay.

**16** (15). Above, bases duller, green. Wings broader; larger, ♂ F 27 mm. Unf apex and all unh dark brown, no ochreous tinge, but with a sparse sprinkling of yellow scales. Unf with an obscure grey apical band and usually two grey spots at the extreme apex. Unh the dorsum and outer margin conspicuously grey scaled: the cell spot (often absent) and inner markings are yellow.

**granadensis** Möschler 1878: ♀ Venezuela. Fig in Seitz as *apastus*, but spot in space 3 absent.

Synonyms. *aulestes* Stoll 1780: Surinam: figured (very well): homonym by Cramer 1777. Fig in Seitz and genitalia figs by G & S and Williams 1927 are all of *narcosius*.

*janeira* Schaus 1902: Rio.

*aulicus* Röber 1925: ♂ Santa Catharina.

B.M. 1 ♀ Mexico. 2 ♂ 4 ♀ Guatemala. 1 ♂ 1 ♀ Panama. 1 ♂ 1 ♀ Colombia. 2 ♂ Venezuela. 1 ♂ Trinidad. 1 ♂ Surinam. 3 ♂ 3 ♀ Fr Guiana. 2 ♂ Ecuador. 3 ♂ 1 ♀ Peru (Tarapote. Ucayali. Chanchamayo). 1 ♂ Bolivia (Reyes). 10 ♂ 5 ♀ Up Amazons. 4 ♂ 4 ♀ Pará. 1 ♂ 2 ♀ Bahia. 1 ♂ Maranhão. 4 ♂ 4 ♀ S. Brazil. 1 ♂ 3 ♀ Paraguay.

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**17a** (13c). Unf white suffusion in space 1b absent or inconspicuous. Above wing bases dull green. Unh dark brown or indigo with faint grey or ochreous markings. Uph cilia inconspicuously white chequered: upf only white in space 1b. The superficial clues to identity of the following 5 species are to be regarded as applying to average specimens: the individual variation is considerable and a genitalia examination is generally necessary.

17b (20a). F spot in space 1b mid termen and spot in space 2: spot in space 3 more or less detached and not completely overlapped by the spot in space 2.

17 (18a). F lower edge of the spot in space 2 elongate towards termen, causing it to be longer than the upper edge. ♂ inner edge of cuiller serrate. ♀ ostium bursa with a central vertical slit. ♂ F 33 mm.

**narcosius**. 2 sub-species.

(a). F markings much reduced, spot in space 2 deeply excavate, leaving its back as a narrow slit. Cuiller short and quadrate, inner edge deeply indented, leaving a short broad projecting process.

Sub-sp. **aulina** nov: ♂ Fr Guiana: type B.M.

B.M. 1 ♂ 2 ♀ Fr Guiana. 1 ♂ Surinam, Aroewarwa Creek, Maroewym Valley.

(b). F markings normal. Cuiller long, inner edge sinuous.

Sub-sp. **narcosius** Stoll 1790: Surinam: figured. Fig Seitz as *aulestes*. Genitalia fig as *aulestes* by G & S and Williams 1927.

B.M. 1 ♂ Surinam. 1 ♂ 1 ♀ Peru (Tarapote. Moyabamba). 1 ♂ Bolivia (Reyes). 5 ♂ Up Amazons (Iquitos. Up Putumayo. St Paulo d'Olivencia). 2 ♂ Pará.

**18a** (17). F spot in space 2 rhomboid, edges equal.

18 (19). F cell spot and spot in space 2 usually apart: spot in space 1b circular or rectangular and without added suffusion unf. Cuiller long and slender, inwardly pointed: valva expanded to a curious double circular process on the inside. ♀ ostium bursa with a wide horizontal mouth.

♂ F 34 mm.

**samson** nov: ♂ Colombia: type B.M. Genitalia fig by Williams 1927 as *colossus*.

B.M. 3 ♂ 3 ♀ Honduras. 2 ♂ Nicaragua. 1 ♂ Costa Rica. 1 ♂ Panama. 5 ♂ 2 ♀ Colombia. 2 ♂ Venezuela. 1 ♂ 1 ♀ Br Guiana. 5 ♂ 2 ♀ Fr Guiana. 1 ♂ Ecuador (Paramba). 2 ♂ 1 ♀ Peru (Inambari. Huancabamba). 1 ♀ Bolivia (Reyes). 5 ♂ 5 ♀ Amazons (St Paulo d'Olivenca to Pará).

**19** (18). F cell spot and spot in space 2 usually overlap: spot in space 1b triangular and unf usually continued to vein 1 by white suffusion. Cuiller short and broad, inwardly curved and spined. ♂ F 32 mm.

**mura** Williams 1927: ♂ Manicore, Rio Madeira: figured ♂ and genitalia. Type has no spot in space 3 F.

B.M. 1 ♂ St Paulo d'Olivenca. 2 ♂ Iquitos. 2 ♂ Pará. 1 ♂ Bahia.

**20a** (17b). F spot in space 1b nearer to spot in space 2 than to termen: spot in space 3 completely overlapped by the spot in space 2.

20 (21). F spot in space 1b not overlapped by the spot in space 2: cell spot and spot in space 2 usually not overlapping. Cuiller long, top rounded and spined. ♀ ostium bursa furnished with two triangular, appressed processes.

**colossus**. 3 sub-species.

(a). Large, ♂ F 35 mm. F spot on costa out of line, nearer base.

Sub-sp. **colossus** Herrich-Schäffer 1869: ♂ Venezuela: type

B.M. Genitalia fig by Williams 1927 = *samson*.

B.M. 2 ♂ Guatemala. 1 ♂ Honduras. 1 ♂ 2 ♀ Colombia. 1 ♂ 3 ♀ Venezuela.

(b). Smaller, ♂ F 33 mm. F spot on costa over centre of cell spot.

Sub-sp. **rhoda** nov: ♂ Peru, Tarapote: May-Aug 1886:

M. de Mathan: type B.M.

B.M. 1 ♂ 1 ♀ Br Guiana. 1 ♂ 2 ♀ Fr Guiana. 5 ♂ 1 ♀ Peru (Tarapote). 2 ♂ Bolivia (Farinas. Buenavista). 1 ♂ Bahia. 1 ♂ Goyaz. 1 ♂ Minas Geraes. 4 ♂ 3 ♀ S. Brazil.

(c). ♂ F 33 mm. End of cuiller bifid. F spot in space 3 unusually long, nearly reaching the cell spot.

Sub-sp. **dosula** nov: ♂ Rio Grande do Sul: type B.M.

B.M. Only the type.



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- 21** (20). F spot in space 1b usually overlapped by the spot in space 2, which also usually overlaps the cell spot. Cuiller with a long slender inwardly projecting process. ♀ ostium bursa upper edge produced or angled.

**parisi.** 2 sub-species.

- (a). ♂ F 31 mm. Cuiller projection well below the curved top of the cuiller.

Sub-sp. **helen** nov: ♂ Honduras, San Pedro Sula: 1895: Erich Wittkugel: type B.M.

B.M. 5 ♂ 2 ♀ Honduras. 1 ♀ Nicaragua. 1 ♂ Panama.

- (b). ♂ F 29 mm. Cuiller projection in line with the straight top of the cuiller.

Sub-sp. **parisi** Williams 1927: ♂ Matto Grosso: figured ♂ and genitalia. Fig Hayward 1948 = *apastus*, but genitalia fig = *parisi*.

B.M. 3 ♀ Venezuela. 5 ♂ Trinidad. 1 ♂ Ecuador (La Chima). 2 ♂ Peru (Chanchamayo. Tarapote). 2 ♂ Bolivia (Buenavista). 4 ♂ Up Amazons (Teffe. Obidos). 1 ♂ Matto Grosso. 1 ♂ Brazil. 5 ♂ 3 ♀ Paraguay.

- 22a** (13b). F no central band of irregularly placed hyaline spots (*xagua christyi* has a compact band and *alector* may have a semi-hyaline band).

- 22 (23a). Unf base broadly brilliant blue. ♂ upf with a short narrow costal fold. ♂ F 27 mm.

**xagua.** 2 sub-species.

- (a). F unmarked except for a white spot mid costa unf.

Sub-sp. **xagua** Lucas 1857: Cuba. Fig Seitz: Williams 1927, ♂ and genitalia.

Synonym. *malefida* Herrich-Schäffer 1862: Cuba.

B.M. 22 ♂ 16 ♀ Cuba.

- (b). F with a narrow compact hyaline white central band from space 1b to costa, no spot in space 3.

Sub-sp. **christyi** Sharpe 1898: ♂ San Domingo: type B.M. Fig Williams 1927.

Synonym. *angustus* Skinner 1920: San Domingo.

B.M. 2 ♂ Haiti.

- 23a** (22). Unf no blue at base except along costa in certain cases. ♂ no costal fold.



23b (33a). Above wing bases shining blue or green.

23c (25a). Unf discal and apical dark bands conjoined to a single band. Below, termen beyond the discal dark band is conspicuously pale brown. ♂ F 25 mm.

23 (24). H with a short tail, 5 mm. Unf costa white to mid wing.

**megalurus** Mabille 1877: ♂ Colombia: type B.M. Fig Seitz.  
 Synonym. *consus* Godman & Salvin 1893: ♂ Mexico: type B.M.: figured ♂ and genitalia.  
 B.M. 2 ♂ 2 ♀ Mexico. 3 ♂ Guatemala. 1 ♂ Colombia.

**24** (23). H not tailed. Unf costa brown.

**elorus** Hewitson 1867: ♀ Brazil: type B.M. Fig Seitz:  
 Hayward 1948, ♂ and genitalia: Williams & Bell 1934, ♂ genitalia.

Synonym. *blasius* Plötz 1882: ♂ "Cuba".

*pheres* Mabille 1903: ♂ Brazil: type B.M. Fig Seitz.

*subblasius* Strand 1920: ♂ Argentine.

B.M. 21 ♂ 9 ♀ S. Brazil (São Paulo. Parana. Rio. Petropolis. Santa Catharina. Novo Friborgo). 1 ♀ Paraguay.  
 1 ♀ Argentine.

**25a** (23c). Unf discal and apical dark bands separated.

25b (29a). Unf the dark bands often obscure, but the discal band is always nearer to the central than to the apical band.

25 (26a). H cilia conspicuously white. Unh with a white border, which extends to unf more or less.

**alardus**. 5 sub-species.

(a). Above wing bases green rather than blue. ♂ large, F 30 mm. Unh white border broad, 7 mm., only slightly shaded and violet in a side light. Unf border tapered to end of vein 6.

Sub-sp. **latia** nov: ♂ Costa Rica: type B.M.

B.M. 2 ♂ 9 ♀ Mexico. 6 ♂ 6 ♀ Guatemala. 1 ♂ Salvador.  
 3 ♀ Nicaragua. 11 ♂ 16 ♀ Costa Rica. 2 ♂ 3 ♀ Panama.  
 1 ♀ Colombia.

(b). Unh the white border is densely shaded, leaving a narrow macular discal band along its inner edge. Unf the white border absent. ♂ F 27 mm.

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Sub-sp. **aquila** nov: ♂ Cauca Valley, Colombia: type B.M.  
B.M. 11 ♂ 7 ♀ Colombia (Cauca Valley. Popoyan).

(c). Unh white border 6 mm. wide, more shaded than in *latia*: violet gloss absent. Unf the white border extends narrowly to veins 2 or 3. ♂ F 27 mm.

Sub-sp. **alardus** Stoll 1790: ♀ Surinam: figured. Fig Seitz: Hayward 1948, ♂ and genitalia: genitalia fig by G & S and by Williams 1927.

Synonyms. *grullus* Mabilles 1888: ♂ "Chiriqui": figured. The fig by G & S is of *latimargo* from Colombia, specimen in B.M.

*cartomes* Mabilles & Boulet 1912: ♂ Venezuela: type B.M.  
Put by authors incorrectly as a synonym of *latimargo*.

*fabrici* Ehrman 1913: ♂ Venezuela. *Fide* Holland 1927.  
B.M. 5 ♂ 3 ♀ Colombia (Bogotá). 23 ♂ 9 ♀ Venezuela.  
20 ♂ 7 ♀ Trinidad. 2 ♂ 2 ♀ Br Guiana. 1 ♂ Surinam.  
1 ♂ Fr Guiana. 3 ♂ 3 ♀ Ecuador. 4 ♂ 1 ♀ Peru (Chanchamayo).  
5 ♂ 3 ♀ Bolivia (La Paz. Cochabamba. Buena-vista).  
4 ♂ 1 ♀ Up Amazons. 2 ♂ 2 ♀ Pernambuco. 1 ♂ 1 ♀ Bahia.  
1 ♂ 2 ♀ Minas Geraes. 4 ♂ 3 ♀ S. Brazil (Parana. Espirito Santo).  
1 ♂ Argentine.

(d). Above wing bases brilliant blue. ♂ F 27 mm. Uph cilia very broadly white. Unh and unf white border 3 mm.

Sub-sp. **habana** Lucas 1857: Cuba. Fig Seitz: genitalia by Williams 1927.

B.M. 21 ♂ 21 ♀ Cuba.

(e). Uph cilia narrowly white. Unh and unf white border narrow, 1½ mm. or less, strongly violet tinted.

Sub-sp. **heriul** Mabilles & Boulet 1912: ♀ "Brazil", *recte* San Domingo: type B.M.

Synonyms. *antiquus* Skinner 1920: San Domingo. Fig Williams 1927.

*domingensis* Joicey & Talbot 1924: ♂ San Domingo.

B.M. 11 ♂ 12 ♀ Haiti.

26a (25). H cilia dark to pale brown. Unh brown with dark bands. Unf tornal quarter of wing white.

26 (27a). Unh basal third of costa white, as in *fulgurator*.  
♂ F 25 mm.

**alector.** 2 sub-species.

(a). Above, wing bases green rather than blue. Unf costa at base shining green, turning to sordid white, up to mid wing: tornal white area in ♂ just entering cell.

Sub-sp. **hopfferi** Plötz 1882: ♂ S. America. Fig Seitz.

Synonym. *uridon* Dyar 1912: ♀ Mexico.

B.M. 7 ♂ 5 ♀ Mexico. 3 ♂ 2 ♀ Guatemala. 3 ♀ Honduras. 2 ♂ Costa Rica. 4 ♂ 2 ♀ Panama. 2 ♂ 1 ♀ Colombia. 1 ♂ 1 ♀ Venezuela. 1 ♂ 1 ♀ Br Guiana. 1 ♂ 1 ♀ Ecuador (Quito). 1 ♀ Peru (Tarapote). 3 ♂ 2 ♀ Bolivia (Santa Cruz. Reyes. Buenavista). 8 ♂ 9 ♀ Amazons (Iquitos. Pebas. Obidos. Nauta. Pará). 1 ♂ Goyaz.

(b). Above, wing bases brilliant blue. Upf an opaque white central band from cell to space 2 in ♂ and to space 1b in ♀, directed to tornus. Unf extreme base of costa orange, turning to white: tornal white area extended to cell in ♂ and ♀.

Sub-sp. **alector** Felder 1867: ♀ Colombia: type B.M.: figured. Fig Seitz.

B.M. 1 ♂ 4 ♀ (Cundinamarca).

**27a** (26). Unh base of costa not white.

27 (28). Form of cuiller of clasp abnormal, quadrate, rounded at back, inner face serrate. Unh basal quarter paler than rest of ground, dark bands well marked. Wing bases, above, blue rather than green. ♂ F 24 mm.

**alfius.** 2 sub-species.

(a). Unf shining green at base costa turning white to mid wing: tornal white area very broad, entering cell in ♂, and uniting with the costal white streak in ♀. Unh basal area covered with yellowish scales.

Sub-sp. **alfius** nov: ♂ St Paulo d'Olivencia, Amazon: type B.M.

B.M. 1 ♂ 1 ♀ Nicaragua. 2 ♀ Colombia. 1 ♂ Venezuela. 3 ♂ 6 ♀ Fr Guiana. 1 ♂ Ecuador (Paramba). 1 ♂ 1 ♀ Peru (Amazonas. Pebas). 1 ♀ Bolivia (Buenavista). 8 ♂ 7 ♀ Up Amazons (Iquitos. Upper Putumayo. Tapajos. St Paulo d'Olivencia. Santarem). 1 ♂ Maranhão.

(b). Unf base costa shining green for a short distance, remainder brown: tornal white area restricted, just entering space 2 in ♂ and reaching cubitus in ♀.

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Sub-sp. **adoba** nov: ♂ Espirito Santo: type B.M.

B.M. 1 ♂ Minas Geraes. 7 ♂ 1 ♀ S. Brazil (Espirito Santo. Rio. Rio Grande).

**28** (27). Form of cuiller normal, triangular: back produced to a sharp point, whence it slopes to a narrow serrate tip on the inside: inner edge of valva deeply excavate.

**creteus.** 5 sub-species.

(a). Above, wing bases blue. Unf extreme base of costa brown, followed by white to mid wing: tornal white area reaches cubitus in ♂, and in ♀ crosses cell to the costal white area. Upf dark bands barely visible. H termen straight. ♂ F 25 mm.

Sub-sp. **crana** nov: ♂ Guatemala, San Geronimo: type B.M.

B.M. 4 ♂ 3 ♀ Guatemala. 8 ♂ 1 ♀ Costa Rica. 1 ♀ Panama.

(b). Unf extreme base of costa green, followed by white: tornal white area crossing cell to costa in ♂ and ♀. Unh paler than usual, ochreous brown. Upf an opaque white central spot in space 2, followed by a shaded white spot in space 1b, nearer termen. ♂ F 27 mm.

Sub-sp. **crilla** nov: ♂ Zamora, Ecuador; 3,000-4,000 ft.: O. T. Barron: type B.M.

B.M. 1 ♂ 1 ♀ Ecuador (Zamora. Aguano).

(c). Unf as *crilla*: unh darker. Upf paler, dark bands conspicuous, no white markings. ♂ F 28 mm. H termen convex.

Sub-sp. **cyprus** nov: ♂ Bolivia: type B.M.

B.M. 2 ♂ Bolivia.

(d). Above, wing bases green, H termen straight. Unf costal streak green, nearly to mid wing: tornal white area restricted, usually not above vein 2 in ♂ and may be shaded, clear white in ♀ and reaches cubitus. ♂ F 25 mm.

Sub-sp. **creteus** Cramer 1780: ♀ Surinam: figured. Fig Seitz: genitalia fig by Williams: Hayward's figures are referable to *siges*.

Synonym. *parmenides* Stoll 1781: ? loc: figured.

B.M. 1 ♂ Panama. 3 ♀ Colombia. 1 ♀ Venezuela. 9 ♂ 7 ♀ Br Guiana. 1 ♂ Surinam. 1 ♂ 1 ♀ Fr Guiana. 2 ♂ Bolivia (Santa Cruz). 4 ♂ 1 ♀ Up Amazons (Up Putumayo. Obidos. St Paulo d'Olivencia). 3 ♂ 7 ♀ Pará. 1 ♀ Pernambuco. 1 ♂ Goyaz.



(e). Above, wing bases blue. H termen straight. Unf costa brown, rarely traces of green iridescence at base: tornal white area variable, usually to cubitus in ♂. ♂ F 26 mm.

Sub-sp. **siges** Mabilles 1903: ♂ Brazil: type B.M. Fig as *creteus* by Hayward 1948, ♂ and genitalia.

B.M. 3 ♂ 2 ♀ Bahia. 12 ♂ 4 ♀ S. Brazil (São Paulo. Rio. Espirito Santo. Santa Catharina). 2 ♀ Paraguay. 1 ♀ Argentine.

**29a** (25b). Unf the dark bands well marked, discal band central between the central band (cell to space 2) and the apical band or nearer to the latter: discal band usually extends to vein 1.

29 (30a). Inner edge of valva of clasp deeply excavate as in *creteus*: back of cuiller sharply pointed as in *creteus*, but the lower end of the cuiller is much broader, as in *chiriquensis*. Above, wing bases green rather than blue and upf dark bands well marked. ♂ F 25 mm. H termen very straight in first two forms.

**latimargo**. 3 sub-species.

(a). Unh border at termen pale yellow, more or less shaded, as in *chiriquensis*, ending just before vein 1b: cilia whitish, but brown between veins 1a and 1b.

Sub-sp. **bifascia** Herrich-Schäffer 1869: ? loc. Identity fixed by Williams & Bell 1934.

Synonym. *telegonoides* Mabilles & Boulet 1912: ♂ Colombia.

B.M. 2 ♂ 2 ♀ Guatemala. 1 ♂ Costa Rica. 2 ♂ 3 ♀ Panama.

(b). Similar, but unh the border is white, slightly shaded, as in *alardus*, 4 mm. wide and not extending to unf, except for whitish cilia to vein 2.

Sub-sp. **latimargo** Herrich-Schäffer 1869: ? loc. Fig Seitz, very well: G & S as *grullus*.

B.M. 1 ♂ Panama. 1 ♂ Colombia. 3 ♂ Ecuador (La Chima).

(c). Unf base costa shining green: tornal area whitish to vein 2. Unh dark brown with darker bands and a yellowish discal dash in space 1c as in *creteus*. Separable from *creteus* by the prominence of the dark bands upf

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and from *oenander* by the straighter bands unh: the 3 species fly together in Pará.

Sub-sp. **tinda** nov: ♂ Pará: type B.M.

B.M. 3 ♂ 1 ♀ Pará.

**30a** (29). Inner edge of valva of clasp not deeply concave, straight or bisinuate. H termen convex.

30 (31a). Below dark bands conspicuous. Tip of cuiller blunt, lower inner end broad as in *latimargo*.

**chiriquensis**. 4 sub-species.

(a). Above, wing bases blue rather than green. H cilia yellow, continuing round tornus to end of vein 1a. Unh with broad yellow border before termen, sometimes more or less shaded brown. ♂ F 24 mm.

Sub-sp. **chiriquensis** Staudinger 1875: ♂ Chiriqui. Fig Staudinger 1888: Seitz: G & S: Hayward 1948, referable to *oenander*: genitalia by Williams 1927.

Synonyms. *weymeri* Plötz 1882: ? loc.

*godmani* Williams 1927: ♂ Nicaragua: for the G & S figure of *chiriquensis*.

B.M. 1 ♂ 1 ♀ Mexico. 2 ♀ Honduras. 2 ♂ Nicaragua. 1 ♂ 3 ♀ Costa Rica. 4 ♂ 1 ♀ Panama. 12 ♂ 5 ♀ Colombia. 1 ♀ Venezuela. 2 ♂ 3 ♀ Ecuador (Banos. Paramba).

(b). Above wing bases dull green, no trace of blue. H cilia yellow to end of vein 1b, which marks the end of the paler yellow border. ♂ F 24 mm.

Sub-sp. **erana** nov: ♂ Balzapamba, Ecuador: type B.M.

B.M. 5 ♂ 3 ♀ Ecuador (La Chima. Chimbo. Balzapamba).

(c). Above, wing bases blue and upf dark bands conspicuous. H cilia brownish. Unh ochreous brown with dark bands, more or less yellow edged. Larger, ♂ F 28 mm.

Sub-sp. **meretrix** Hewitson 1876: ♀ Ecuador: type B.M.

B.M. 3 ♀ Ecuador (Rio Pastaza. Jorge). 4 ♂ Peru (Cuzco. San Remon. Chanchamayo). 10 ♂ 1 ♀ Bolivia (La Paz. Cochabamba).

(d). Above, wing bases iridescent green. H cilia brownish. Unf basal third of costa shining green: tornal area brownish white to vein 2, much as in *creteus*, but the discal band more or less reaches vein 1. Unh brown with

some ochreous scaling and conspicuous dark bands, resembling *meretrix*, but darker. ♂ F 25 mm.

Sub-sp. **oenander** Hewitson 1876: Pará. Fig as *chiriquensis* by Hayward 1948, ♂ and genitalia.

B.M. 1 ♂ Br Guiana. 5 ♂ Fr Guiana. 7 ♂ Up Amazons (Pebas. Iquitos. R. Tapajos). 8 ♂ Pará. 7 ♂ 8 ♀ S. Brazil (Espírito Santo. Santa Catharina. São Paulo). 1 ♂ 1 ♀ Paraguay.

**31a** (30). Below, dark bands very faint.

31 (32). ♂ F 23 mm. Above, wing bases green. Below with green suffusion on pectus, palpi and wing bases. Tip of cuiller bluntly pointed, lower edge narrow, as in *creteus*. Upf bands absent: unf paler mid dorsum: unh broadly darker before termen.

**jaira** Butler 1870: ♂ W. Indies: type B.M. Fig Butler 1874: Seitz.

Synonym. *jamaicensis* Williams 1927: ♂ Jamaica: figured ♂ and genitalia.

B.M. 24 ♂ 8 ♀ Jamaica.

**32** (31). ♂ F 30 mm. Above, thorax and wing bases (very narrowly) pale blue glossed. Upf bands just visible, even fainter unf and absent unh, which is uniform chocolate. Below pectus and palpi brown. Tip of cuiller rounded, lower edge narrow.

**cassander** Fabricius 1793: ? loc: figured Jones Icones, which does not show the blue gloss, but that is absent in several B.M. specimens.

Synonyms. *cretellus* Herrich-Schäffer 1869: ? loc. MS fig of type in B.M. Genitalia fig by Williams & Bell 1934.

*jariba* Butler 1870: ♂ Cuba: type B.M. Fig Butler 1874.

*geronae* Holland 1916: Is des Pins, Cuba.

B.M. 23 ♂ 20 ♀ Cuba.

**33a** (23b). Above wing bases not conspicuously shining blue or green. Inner edge of valva of clasp concave: back of cuiller produced to a blunt point.

33 (34). Large, ♂ F 30 mm. Uph without yellow colouring and cilia brown. Head and thorax, above, dark green.

**galesus.** 2 sub-species.

(a). Above and below, dark brown. Upf and unf outwardly paler and the discal band visible. Uph no band. Unh the dark discal band faint and the termen paler. Resembles *cassander*.

Sub-sp. **cassius** nov: ♂ Irazu, Costa Rica, 6,000–7,000 ft.: H. Rogers: type B.M. Fig as *hahneli* by G & S: Seitz: genitalia by Williams & Bell 1934.

B.M. 8 ♂ 4 ♀ Costa Rica. 1 ♂ Panama. 1 ♂ Venezuela.

(b). Above, lighter brown, both dark bands upf and the discal band uph conspicuous: faint green suffusion on thorax and extreme bases of wings. Below, brighter, ochreous brown: some faint green suffusion on pectus, palpi and wing bases. Unh the dark discal band outwardly more or less edged with yellow.

Sub-sp. **galesus** Mabille 1888: ♂ Chanchamayo: figured. Fig Williams 1927, ♂ and genitalia.

Synonym. *subflavus* Williams 1927: ♂ Ecuador: figured.

B.M. 4 ♂ 1 ♀ Colombia. 2 ♂ 2 ♀ Ecuador (Zamora. Loja. R. Pastaza). 6 ♂ 2 ♀ Peru (Chanchamayo. Cuzco. R. Tabaconas. Manchara. Huancabamba. Amazonas). 13 ♂ Bolivia (La Paz. S. Antonio. R. Songo. Farinas. Cochabamba).

**34 (33).** ♂ F 25 mm. Brown with well-marked dark bands.

**anaphus.** 5 sub-species.

(a). Uph tornal yellow colouring narrow, not reaching vein 2 and divided by a brown tongue to end of vein 1. Unh the broad yellow border shaded to vein 2.

Sub-sp. **annetta** nov: ♂ Tres Rios, 5,000 ft.: Costa Rica: type B.M.

B.M. 25 ♂ 18 ♀ Mexico. 15 ♂ 6 ♀ Guatemala. 7 ♂ 3 ♀ Honduras. 1 ♂ Salvador. 5 ♂ 1 ♀ Nicaragua. 32 ♂ 14 ♀ Costa Rica. 8 ♂ 10 ♀ Panama. 31 ♂ 10 ♀ Colombia. 1 ♂ 3 ♀ Venezuela. 1 ♂ 1 ♀ Trinidad. 5 ♂ 1 ♀ Br Guiana. 9 ♂ 8 ♀ Ecuador. 19 ♂ 7 ♀ Peru (Chanchamayo. Carabaya). 4 ♂ Bolivia.

(b). Uph yellow colour at tornus broad, 5 mm., reaching vein 3 and not divided by a brown tongue. Unh the border clear yellow to vein 4 or 5.



Sub-sp. **anaphus** Cramer 1777: Surinam: figured. Fig Seitz: Hayward 1948, ♂ and genitalia: genitalia by Williams 1927.

Synonyms. *leucogramma* Sepp 1848: ♂ Surinam: figured. *anaphides* Mabilite & Boullet 1912: ♂ Brazil.

B.M. 2 ♂ 1 ♀ Surinam. 1 ♂ 1 ♀ Fr Guiana. 1 ♂ 1 ♀ Ecuador (Canelos). 1 ♀ Peru (Amazonas). 5 ♂ 5 ♀ Up Amazons. 6 ♂ 11 ♀ Pará. 1 ♂ 1 ♀ Maranhão. 4 ♂ 4 ♀ Bahia. 2 ♂ Pernambuco. 2 ♂ Minas Geraes. 1 ♂ 1 ♀ Matto Grosso. 12 ♂ 7 ♀ S. Brazil. 13 ♂ 7 ♀ Paraguay. 2 ♂ 2 ♀ Argentine.

(c). Uph no yellow at tornus. Unh the yellow border outwardly edged by conical brown spots.

Sub-sp. **anoma** nov: ♂ Trinidad: type B.M.

B.M. 5 ♂ 4 ♀ Venezuela. 15 ♂ 6 ♀ Trinidad. 1 ♂ 1 ♀ Br Guiana. 3 ♂ 2 ♀ Peru (Trujillo). 4 ♂ 2 ♀ Porto Real.

(d). Unh the yellow border absent: ochreous brown with dark bands, resembling *galesus*: cilia brown.

Sub-sp. **aniza** nov: ♂ Peru, Callao: Walker: type B.M.

B.M. 4 ♂ 5 ♀ Peru (Callao. Chorica. Angamarca). 1 ♀ Uruguay.

(e). Unh the yellow border absent and the ground colour ochreous brown, as in *aniza*, but the dark discal band is outwardly yellow edged: cilia variable, yellow to brown.

Sub-sp. **anausis** Godman & Salvin 1896: ♂ St Vincent: type B.M.

Synonyms. *grenadensis* Schaus 1902: Grenada.

*alpistus* Mabilite 1903: ♂ Santa Catharina, Brazil. Exactly resembles *anausis* and probably wrongly labelled.

*cubana*. Mabilite & Boullet 1912: Cuba.

*roysi*. Avinoff & Shoumatoff: ♂ Jamaica.

B.M. 16 ♂ 12 ♀ Cuba. 9 ♂ 8 ♀ Haiti. 5 ♂ 2 ♀ Jamaica. 7 ♂ 2 ♀ Dominica. 6 ♂ 2 ♀ St Vincent. 1 ♂ 1 ♀ "Brazil".

**C.15. CALLIADES** Mabilite & Boullet 1912: type *oryx* Felder: fixed by Lindsey 1925 as *phryniscus* Hewitson, which is a synonym of *oryx*.

Resembles *Astraptes* in venation and antennae. Differs in respect of the elongate hindwing with a rounded tornus.

C.16 AUTOCHTON

In appearance the species resemble *Autochton* having a white band upf and no apical spots. ♂ F 25 mm.

1 (2). Upf the white band absent in space 3. Unh termen white bordered before the cilia. ♂ with a costal fold upf.

**oryx** Felder 1862: ♀ Rio Negro: type B.M.

Synonyms. *phrynicus* Hewitson 1867: ♂ Amazons: type B.M. Fig Seitz: genitalia by Williams & Bell 1934.

*viridans* Mabille 1888: ♂ Amazons: type B.M.: figured. B.M. 2 ♂ Br Guiana. 24 ♂ 21 ♀ Up Amazons (Iquitos. Teffe. St Paulo d'Olivencia). 2 ♂ Pará.

2 (1). Upf with a spot of the band in space 3. Unh no white border, cilia brownish white. ♂ without a costal fold.

**zeutus** Möschler 1878: ♂ Colombia. Fig Seitz.

Synonyms. *koluthos* Plötz 1882: ♂ Colombia: copy of Plötz's MS fig in B.M.

*polias* Godman 1901: ♀ Panama: figured.

*rhacoces* Mabille & Boulet 1912: ♂ S. America: type B.M.

B.M. 1 ♂ Br Guiana. 1 ♂ Up Amazons (Iquitos). 1 ♂ Bolivia (Buenavista). 1 ♂ S. America.

**C.16. AUTOCHTON** Hübner 1823: type *itylus* Hübner: sole species included.

Synonyms. *Cecrops* Hübner 1818: type *zarex* Hübner: sole species included: homonym by Leach 1816.

*Cecropterus* Herrich-Schäffer 1869: to replace *Cecrops*.

*Rhabdoides* Scudder 1889: type *cellus* Boisduval and Le Conte: sole species included.

Characterised by the continuous pale band on the forewing. Closely allied to *Achalarus* having the antennae bent at the thickest part of the club shortly after the beginning of the nudum, which has only 18 segments as against 22 to 26 for *Achalarus*. Also the tornus of the hindwing is more rounded, not V-shaped as in *Achalarus*. The antennae in *sulfureolus* are aberrant, the nudum having 28 segments, but in all other respects it resembles the other species of the genus.

1a (6a). Unf apical spots extend into space 9.

1b (3a). Cilia chequered. Band F yellow.

1 (2). Unh variegated beyond the dark discal band: usually with an irregular narrow pale band followed by a dark margin, more or less covered with ashy scaling. ♂ F 24 mm.

**cellus** Boisduval & Le Conte 1883: ♀ N. America: type B.M.: figured. Fig Seitz: Holland 1931: Clark 1932: genitalia by G & S and by Lindsey, Bell & Williams 1931. Synonyms. *festus* Geyer 1837: ♀ ? loc: figured.

*mexicana* Draudt 1922: ♂ Mexico: figured.

*aerofuscus* Gunder 1925: ♂ ? loc: figured.

*leilae* Clark 1930: Maryland. Figured Clark 1936.

B.M. 39 ♂ 11 ♀ Arizona. 4 ♂ Florida. 1 ♂ Georgia. 1 ♂ California. 3 ♂ 1 ♀ Texas. 1 ♂ Virginia. 1 ♂ N. Carolina. 28 ♂ 14 ♀ Mexico. 1 ♂ "Venezuela". 1 ♂ "Cuba".

2 (1). Unh quite plain beyond the discal band. Smaller, ♂ F 21 mm.

**pseudocellus** Coolidge & Clemence 1911: ♂ Arizona. Fig Holland 1931: genitalia by Lindsey, Bell & Williams 1931. B.M. 4 ♂ Arizona. 7 ♂ 2 ♀ Mexico (Las Vegas. Milpas. Pinal).

3a (1b). Cilia not chequered.

3 (4a). Cilia H conspicuously white throughout. Upf band narrow,  $1\frac{1}{2}$  mm., pale yellow. ♂ F 20 mm.

**cincta** Plötz 1882: Oaxaca: copy of Plötz's MS fig in B.M. Fig in Seitz is of *neis*. Fig G & S: genitalia by Williams & Bell 1934.

Synonym. *rotundatus* Mabilie 1883: S. America: type B.M.

B.M. 7 ♂ 3 ♀ Mexico. 4 ♂ 6 ♀ Guatemala.

4a (3). Cilia H brown, sometimes paler towards apex.

4 (5). Upf band yellow: typically there are 4 apical spots, but in Mexico and Guatemala the lower spot in space 6 is usually absent. ♂ F 20 mm.

**vectilucis** Butler 1874: ♂ Costa Rica: figured. Fig Seitz: genitalia by Williams & Bell 1934.

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B.M. 1 ♂ Mexico. 15 ♂ 1 ♀ Guatemala. 21 ♂ 8 ♀ Costa Rica. 3 ♂ 4 ♀ Panama.

- 5 (4). Upf band white. Closely resembles *neis* and *reflexus*, but for the 4 apical spots upf. Unf there is broad discal area between veins 2 and 6 covered with grey scaling, followed by dark conical spots along the termen, resembling *bipunctatus*, but less extensive. Unh the dark bands are broad: discal band outwardly straight and whitish edged. ♂ F 19 mm.

**integrifascia** Mabilie 1891: ♀ Brazil.

B.M. 1 ♂ Bolivia (Yungas, La Paz). 5 ♂ 2 ♀ S. Brazil (Parana. São Paulo. Rio).

- 6a (1a). F no apical spot in space 9.

6b (10a). Wings produced: H longest at end of vein 1b.

6c (8a). Upf with 3 apical spots. Unh cilia usually brown, but if white or whitish, that colouring does not extend to the wing. Unf outwardly rather paler, but no discal area of pale scaling followed by dark spots as in *integrifascia* and *bipunctatus*.

6 (7). End of cuiller at back right-angled to a straight top. ♂ upf generally with the spots composing the central band irregular, separated by dark veins and the spot in space 3 placed on the outer edge of the spot in space 2, far from the cell spot (Seitz fig of *bocus*). ♀ upf (Geyer's fig of *neis*) has the band compact: the cell spot is usually separated from the spot in space 2 by a dark vein: the spot in space 1b is generally of equal width throughout and the edges are parallel. But there is a great deal of variation: some males look like females and vice versa. Unh the bands are typically narrow, but often are broad: the outer edge of the discal band is generally straight. The width of the turned-in part of the cuiller displays considerable variation. ♂ F 19 mm.

**neis** Geyer 1832: ♀ Brazil: figured. Fig Seitz: genitalia by G & S: Hayward 1948 figures = *reflexus*.

Synonyms. *lumulus* Plötz 1882: ♀ S. America. Fig Seitz.

*bocus* Plötz 1882: ♂ Pará. Fig Seitz.

*dhega* Mabilie 1891: ♂ Jalapa.



*agathokles* Ehrman 1918: ♀ Venezuela. *Fide* Holland 1927.

B.M. 19 ♂ 12 ♀ Mexico. 1 ♂ 3 ♀ Guatemala. 1 ♂ Salvador. 2 ♂ 3 ♀ Nicaragua. 6 ♂ 3 ♀ Costa Rica. 8 ♂ 5 ♀ Panama. 11 ♂ 3 ♀ Colombia. 8 ♂ 2 ♀ Venezuela. 15 ♂ 4 ♀ Trinidad. 1 ♀ Jamaica. 11 ♂ Br Guiana. 1 ♂ Surinam. 8 ♂ 4 ♀ Fr Guiana. 6 ♂ 1 ♀ Ecuador (Zamora. Quito. Chimbo. Angamarca). 8 ♂ 4 ♀ Peru (Charape. Chanchamayo. Chaquimayo. Pebas). 3 ♂ 1 ♀ Bolivia (La Paz. Buenavista. Santa Cruz). 12 ♂ Up Amazons (Iquitos to Obidos). 21 ♂ 9 ♀ Pará. 5 ♂ 2 ♀ N. Brazil (Bahia. Pernambuco). 1 ♂ Goyaz. 2 ♂ Matto Grosso. 1 ♀ Minas Geraes. 6 ♂ 7 ♀ "Brazil". 4 ♂ 3 ♀ S. Brazil (Rio. Parana. Espirito Santo. Rio Grande). 1 ♂ 1 ♀ Paraguay.

- 7 (6). End of cuiller shouldered at back, top rounded. ♂ ♀ band upf rather broader, compact, all veins crossing it white. Unf the spot in space 1b tapers towards vein 1, inwardly bisinuate, acutely in ♀, appearing recurved towards the base. Unh discal band outwardly concave. Larger, ♂ F 21 mm.

**reflexus** Mabilie & Boullet 1912: ♀ Brazil: type B.M. Figured ♂ and genitalia by Hayward 1948 as *neis*. B.M. 7 ♂ 17 ♀ S. Brazil (Petropolis. Espirito Santo. Rio. Santa Catharina. Novo Friborgo). 1 ♂ 1 ♀ Paraguay.

- 8a (6c). Unh apical half of termen narrowly white before the white cilia. Upf at most 2 apical spots, more often 1 or none: band compact.

8 (9). Cuiller turned inward as a long curved spine: valva with a slender style directed to the tip of the cuiller. Upf often with a tiny brown spot on the band at the origin of vein 3: origin of vein 11 is at the centre of the band, which is generally constricted at the costa. ♂ F 20 mm.

**longipennis** Plötz 1882: S. America.

Synonym. *capys* Godman & Salvin 1894: ♂ Mexico: type B.M.: figured ♂ and genitalia.

B.M. 5 ♂ 2 ♀ Mexico. 1 ♂ Guatemala. 1 ♂ Honduras. 1 ♂ 1 ♀ Nicaragua. 1 ♂ 1 ♀ Costa Rica. 5 ♂ 3 ♀ Panama. 19 ♂ 15 ♀ Colombia. 5 ♂ 2 ♀ Venezuela. 6 ♂ 2 ♀ Trinidad.

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12 ♂ 2 ♀ Br Guiana. 8 ♂ Fr Guiana. 16 ♂ 8 ♀ Ecuador (Paramba. Loja. Zamora. Angamarca). 10 ♂ 6 ♀ Peru (Chanchamayo. Ucayali. Loreto). 21 ♂ 10 ♀ Bolivia (Cochabamba. Buenavista. Santa Cruz). 20 ♂ 9 ♀ Up Amazons (Iquitos. Manicore. St Paulo d'Olivencia). 1 ♂ 4 ♀ Pará. 2 ♀ Minas Geraes. 10 ♂ 9 ♀ S. Brazil (Rio. São Paulo. Espirito Santo. Novo Friborgo). 7 ♂ 3 ♀ no loc.

- 9 (8). Cuiller triangular, produced to a point at the back: no style on valva. F origin of vein 11 is near the outer edge of the band, which is tapered rather than constricted at costa and is more or less curved basad. ♂ F 18 mm. ♂♂ of these 2 species can be readily separated by brushing the end of the abdomen so as to see the tip of the clasp.

**zarex** Hübner 1818: Surinam: figured. Fig Hayward 1948, ♂ and genitalia.

Synonyms. *ainus* Fabricius 1781: "♀ Equinoct Africa": type B.M. (Banks Coll). Fig Seitz: genitalia by G & S. Homonym by Cramer 1775.

*brontes* Fabricius 1787: America. Homonym by Denis & Schiffermuller 1776.

*isokrates* Ehrman 1918: ♂ Venezuela. *Fide* Holland 1927. *assaracus* Hayward 1938: ♂ Brazil: genitalia figured.

B.M. 23 ♂ 7 ♀ Mexico. 7 ♂ 3 ♀ Guatemala. 5 ♂ 3 ♀ Honduras. 3 ♂ 1 ♀ Salvador. 6 ♂ 2 ♀ Costa Rica. 16 ♂ 8 ♀ Panama. 18 ♂ 7 ♀ Colombia. 16 ♂ 5 ♀ Venezuela. 24 ♂ 8 ♀ Trinidad. 7 ♂ 3 ♀ Br Guiana. 7 ♂ 1 ♀ Fr Guiana. 8 ♂ 2 ♀ Ecuador (Paramba. Loja. La Chima). 5 ♂ 3 ♀ Peru Chanchamayo. R. Tabaconas. Pebas. Ucayali. San Gaban). 2 ♂ 2 ♀ Bolivia (Mapiri. Buenavista. Santa Cruz). 18 ♂ 8 ♀ Up Amazons (Iquitos to Obidos). 5 ♂ 7 ♀ Pará. 2 ♂ Maranhão. 2 ♀ Bahia. 1 ♂ Goyaz. 1 ♂ Minas Geraes. 30 ♂ 8 ♀ S. Brazil (Parana. Rio. São Paulo. Espirito Santo). 8 ♂ 6 ♀ Paraguay. 1 ♂ Argentine.

- 10a (6b). Wings rounded: H, at end of vein 4, as long as or longer than at end of vein 1b.

10b (13). Unh with dark bands as usual. Palpi grey or brown.

10c (12). F the white band passes through base of space 3.

10 (11). F band white and placed so that the origin of vein 11 falls inside the band. Upf usually 2 apical spots in spaces 7 and 8, rarely a third in space 6 and sometimes none at all. Unf with a pale discal band from vein 2 to the costa, outwardly flanked by conical dark spots along the termen. H upper half of termen with irregular white cilia. ♂ F 19 mm.

**bipunctatus** Gmelin 1790: "Exoticus". Fig in Seitz = *longipennis* probably.

Synonyms. *orontes* Plötz 1882: Lagueyra. ♂ in B.M. from Ecuador without apical spots agrees with Plötz's MS fig. *zonilis* Mabilie 1883: ♂ Colombia: type B.M. Fig Seitz. B.M. 1 ♀ Mexico. 2 ♀ Honduras. 2 ♀ Costa Rica. 1 ♂ 1 ♀ Panama. 13 ♂ 6 ♀ Colombia. 17 ♂ 4 ♀ Venezuela. 3 ♂ Fr Guiana. 3 ♂ 1 ♀ Ecuador (Esmeralda. La Chima. Zamora). 1 ♂ Peru (Ucayali). 2 ♂ Bolivia. 3 ♂ 3 ♀ Amazons (St Paulo d'Olivencia. Manicore. Pará). 1 ♂ Maranhão. 1 ♀ Minas Geraes. 1 ♂ "Brazil".

11 (10). F band pale greenish yellow, placed nearer base than origin of vein 11. Upf 3 apical spots. Unf plain brown. Unh bands faint: upper part of termen narrowly white before the white cilia. ♂ F 22 mm.

**sulfureolus** Mabilie 1883: Brazil. Genitalia fig by Williams & Bell 1934.

B.M. 5 ♂ 6 ♀ S. Brazil (Espírito Santo. Novo Friburgo).

12 (10c). F no white spot at base of space 3: 2, 1 or no apical spots. Unf dorsum pale brown. Cilia H brown, rarely white about apex. ♂ F 16 mm.

**itylus** Hübner 1823: ♀ Surinam: figured. Fig Seitz.

B.M. 2 ♂ 1 ♀ Venezuela. 11 ♂ 18 ♀ Br Guiana. 3 ♂ 1 ♀ Surinam. 5 ♂ 5 ♀ Fr Guiana. 3 ♂ 1 ♀ Ecuador (Paramba). 1 ♂ N. Peru (Manchara). 1 ♀ Iquitos. 19 ♂ 12 ♀ Pará. 1 ♂ Pernambuco. 1 ♀ Goyaz. 3 ♂ 2 ♀ S. Brazil (Espírito Santo).

13 (10b). Unh without dark bands: instead faint yellow small spots, 2 in cell and discal row, often incomplete. Palpi below, bright yellow. H cilia white for a short

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distance below apex (sometimes absent). F with 3 irregular apical spots (absent in one case), occasionally also with spots in spaces 4 and 5. ♂ F 16 mm.

**electrus** Mabilles 1891: ♂ Chanchamayo, Peru: MS fig by Mabilles in B.M.

B.M. 3 ♂ Ecuador. 1 ♂ Peru (Chanchamayo). 11 ♂ 6 ♀ Up Amazons (Iquitos. Pebas. Up Putumayo. Ucayali. St Paulo d'Olivencia).

**C.17. ACHALARUS** Scudder 1872: type *lyciades* Hübner: fixed by author as *lycidas* Abbott & Smith, a homonym by Cramer 1777 and replaced by *lyciades*.

Synonym. *Murgaria* Watson 1893: type *albociliatus* Mabilles: fixed by author.

Allied to *Autochton* and *Thorybes*, differing from the former in the forewing being more or less spotted instead of banded, and from the latter in having the hindwing tornus produced. The antennae, as in *Urbanus*, are bent at the thickest part of the club: nudum 4/17 to 5/20. ♂ with a costal fold except in 2 species.

1a (3a). F with hyaline spots: cilia chequered.

1 (2). F hyaline spots yellow, large, overlapping. ♂ with a costal fold. ♂ F 21 mm.

**lyciades** Hübner 1819: in replacement of *lycidas*. Fig Geyer 1832: genitalia by Lindsey, Bell & Williams 1931. Synonyms. *lycidas* Abbott & Smith 1797: Georgia: figured. Fig Holland 1931.

*hedysarum* Scudder MS 1889 = *lycidas*.

B.M. 59 ♂ 37 ♀ U.S.A. (Arkansas. N. & S. Carolina. Georgia. Florida. Texas. Maryland. New York. Pennsylvania. Tennessee. W. Virginia. Alabama. Ohio).

2 (1). F hyaline spots small, white, separated. ♂ without a costal fold. H cilia white.

**casica**. 2 sub-species.

(a). Large, F 24 mm. F spots conspicuous.

Sub-sp. **casica** Herrich-Schäffer 1869: ? loc. Fig Seitz: genitalia by Lindsey, Bell & Williams 1931.



Synonyms. *epigena* Butler 1870: ♂ Mexico: figured: type B.M. Fig Holland 1931: genitalia by G & S.

*orestes* Lintner MS 1873 = *epigena*.

B.M. 22 ♂ 22 ♀ Arizona. 2 ♀ Texas. 5 ♂ 5 ♀ Mexico (Durango. Guerrero. Orizaba. Cuernavaca. Guadalajara).

(b). Smaller, ♂ F 22 mm. F spots reduced to dots. Unh white border broader.

Sub-sp. **tehuacana** Draudt 1922: ♀ Tehuacan, Mexico: figured.

B.M. 2 ♂ Guatemala.

**3a** (1a). F without hyaline spots: with more or less well-marked dark spots, generally obscure above, more conspicuous below. Unh with dark bands. Cilia not chequered.

3 (4a). ♂ no costal fold. F the dark discal spots in spaces 2 and 3 in line or overlapping. ♂ F 24 mm.

**albociliatus**. 3 sub-species.

(a). F cilia brown, H white.

Sub-sp. **albociliatus** Mabilie 1877: ♂ "Colombia": MS fig of type in B.M. Fig Seitz: ♂ and genitalia by G & S: genitalia by Skinner & Williams 1922 and Lindsey, Bell & Williams 1931.

B.M. 22 ♂ 7 ♀ Mexico (2 ♂ have aberrant genitalia).

14 ♂ 3 ♀ Guatemala. 6 ♂ Honduras. 3 ♂ 3 ♀ Nicaragua.

1 ♂ Salvador. 9 ♂ Costa Rica. 1 ♂ "Venezuela".

(b). F and H cilia white. Much darker, markings invisible. ♂ F 24 mm.

Sub-sp. **leucophrys** Mabilie 1897: ♂ Colombia: type B.M.

B.M. 13 ♂ 1 ♀ Panama. 1 ♂ Colombia.

(c). F and H cilia brown, but unh preceded by a very narrow white line. Paler, markings conspicuous. ♂ F 22 mm.

Sub-sp. **nocera** Plötz 1882: ♂ Colombia.

Synonym. *mithras* Mabilie 1888: ♀ Porto Cabello: figured.

B.M. 1 ♂ 1 ♀ Colombia (Lake Sapatoza, Chirigua). 1 ♂ Venezuela.

**4a** (3). ♂ with costal fold. Unf discal spots in spaces 2 and 3 separated.

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4 (5). H tornus produced and rounded at end of vein 1b, as in all preceding species. H cilia white, but often brownish or brown. In 2 ♂ (Jalapa. Nicaragua) the costal fold is very thin. The cuiller of the clasp varies considerably, as specified in the list of the B.M. material. But the differences seem to be individual rather than sub-specific. ♂ F 24 mm.

**toxeus** Plötz 1882: Mexico: copy of Plötz's MS plate in B.M. Fig genitalia by Williams & Bell 1934.

Synonyms. *coyote* Skinner 1892: ♂ Texas. Type fig by Holland 1931: genitalia by Lindsey, Bell & Williams 1931. *nigrociliata* Mabilbe & Boulet 1912: ♂ Mexico.

B.M. A. Long tip to cuiller. 9 ♂ 4 ♀ Mexico (Guerrero. Colima. Jalisco. Durango. R. Balzas).

B. Short tip to cuiller. 1 ♂ Mexico (Jalapa). 1 ♂ 1 ♀ Guatemala. 1 ♀ Honduras. 6 ♂ Nicaragua. 1 ♀ Costa Rica. 1 ♀ Panama. 1 ♀ "Venezuela".

C. Rounded tip to cuiller. 2 ♂ S. Mexico (Ganahl).

D. Cuiller no tip, end rounded, broad. 2 ♂ no loc.

E. Cuiller as D, but narrower. 1 ♂ Mexico (Oaxaca). 1 ♂ Nicaragua (conspicuous costal fold).

5 (4). ♂ ♀ H lobed, termen excavate before vein 1b. H cilia conspicuously white. ♂ F 25 mm.

**jalapus** Plötz 1882: ♀ Jalapa, Mexico: copy of Plötz's MS figure in B.M. agreeing with description and B.M. material. Fig in Seitz is incorrect and probably = *toxeus*. Synonym. *xerxes* Bell 1934: ♂ Honduras: genitalia figured.

B.M. 5 ♂ 1 ♀ Mexico (Jalapa. Ganahl. Guadalajara). 1 ♂ Guatemala. 2 ♀ Honduras. 1 ♂ Colombia.

**C.18. VENADA** Evans (p. 41 *ante*): type *advena* Hewitson: fixed by author.

*V. advena* is a species that cannot be fitted into any genus hitherto described. The genitalia are of the *Urbanus* type. The antennae are hooked: the cell F is two-thirds of the costa in length: H broader at end vein 6 than the length of the F at the end of vein 1. These characters place it in the

*Achalarus* sub-group. It has the same tornally produced H and angled apex as *Achalarus*, differing only in the highly convex termen: the antennae are longer,  $> \frac{1}{2}$  costa, and the nudum consists of 9 segments on the club and 17 on the apiculus.

Single species. ♂ F 23 mm. Above resembles *Achalarus lyciades*: F apical dots in spaces 6 to 9 (often some absent), compact broad central band of large conjoined spots in spaces 1b, 2, 3 and cell and there may be 2 separated dots on costa, all hyaline pale yellow. Unh with dark bands, the discal bands being more or less outwardly edged with white dots. ♂ with costal fold upf.

**advena** Mabilie 1889: ♀ Chiriqui. Fig G & S: genitalia by Williams & Bell 1934.

B.M. 1 ♂ Nicaragua. 4 ♂ 5 ♀ Panama. 2 ♀ Colombia. 1 ♂ Peru (Moyabamba). 1 ♂ Bolivia (La Paz). 1 ♂ "Brazil".

**C.19. THORYBES** Scudder 1872: type *daunus* Cramer: fixed by author as *bathyllus* Abbott & Smith, a synonym of *daunus*.

Synonym. *Cocceius* Godman & Salvin 1900: type *pylades* Scudder: fixed by author.

Genitalia of the *Urbanus* type. Differs from *Achalarus* and *Autochton* in the shorter tornus H, so that vein 1A and the abdomen =  $\frac{3}{4}$  instead of  $\frac{2}{3}$  dorsum. Upf with hyaline spots and generally a detached spot in space 1b. Upf with a costal fold in 2 species. Antennae 4/19: club stout, apiculus tending to be arcuate.

1a (3a). ♂ upf with a costal fold.

1 (2). H cilia white. ♂ F 20 mm.

**drusius** Edwards 1883: ♂ S. Arizona. Fig by Skinner 1911.

Synonym. *paucipunctata* Dyar 1916: ♂ Mexico. Fig Seitz.

B.M. 6 ♂ 4 ♀ Arizona. 1 ♀ California (?). 6 ♂ Mexico (Guerrero and N. Sonora).

2 (1). H cilia brown. ♀ upf generally with a well-marked spot in space 1b and a lower spot in space 2: cilia

C.19 THORYBES

chequered pale and dark brown. ♂ F 20 mm. Upf spotting very variable.

**pylades** Scudder 1870: for *bathyllus* Harris, nec Abbott & Smith: Massachusetts. Fig Holland: Wright, fig 471: Comstock, pl 58/1 as *mexicana*: Seitz. Genitalia fig Lindsey, etc., pl 6/1.

Synonyms. *immaculata* Skinner 1900: ♂ Philadelphia.

*albosuffusa* Freeman 1943: ♂ Texas.

B.M. 15 ♂ 15 ♀ Canada. 180 ♂ 150 ♀ U.S.A. 7 ♂ 2 ♀ Mexico.

3a (1a). ♂ upf no costal fold. Upf generally if the spot in space 1b is present, the spot in space 2 runs to vein 3, at least unf.

3b (6). Cilia not, or inconspicuously, chequered. Upf no spots in spaces 4 and 5.

3 (4a). Upf spotting complete and well marked: the spots in spaces 2 and 3 contiguous or conjoined: cell spot across the cell and a spot on the costa above it. Unh usually a whitish subternal spot. ♂ F 18 mm.

**daunus** Cramer 1777: ♀ "Surinam": pl 126 F. Fig Seitz. Synonyms. *bathyllus* Smith 1797: Georgia: figured. Fig Holland. Genitalia fig Lindsey, etc.

? *syloson* Mabille 1904: ♀ Fr Guiana (? wrong label).

B.M. 62 ♂ 35 ♀ E. U.S.A.

4a (3). Upf spotting usually reduced: spots in 2 and 3 apart 4 (5). Cuiller of clasp slender, tip curved over and ending inwardly in a sharp point, rather as in *drusius*. Superficially difficult to separate from forms of *mexicana*: generally upf with a costal spot over the cell spot: unh more uniform, dark bands fainter, macular, and striation inconspicuous. ♂ F 16 mm.

**diversus** Bell 1927: ♂ California. Fig Wright, No. 472 as *mexicana*. Genitalia fig Lindsey, etc.

B.M. 1 ♂ Oregon, Sissons. 7 ♂ 6 ♀ California (Yosemite. Plumas Co.).

5 (4). Cuiller with a pointed tip and a broad serrate inner face, the ends of which are produced in *confusus*, slender



and concave in *nevada*, similar but broader in *dobra*, straight or convex in *mexicana*.

**mexicana.** 5 sub-species.

(a). Large, ♂ F 20 mm. Very like *pylades*. Upf spot in space 1b usually present, but the spot in space 2 is either absent or a narrow streak across the space: often a costal spot over the cell spot, which is absent in the other sub-species. Unh dark and uniform.

Sub-sp. **corusis** Bell 1932: ♂ Florida. Fig Holland. Genitalia fig Lindsey, etc.

B.M. 1 ♂ Pennsylvania. 14 ♂ 3 ♀ Florida.

(b). Small, ♂ F 15 mm. Wings semi-transparent. Upf spotting generally complete, except for the lower part of the cell spot and the costal spot. Unh conspicuously striated and bands prominent, more uniform than *dobra* and *mexicana*.

Sub-sp. **nevada** Scudder 1872: Sierra Nevada, California. Fig Comstock: Holland: genitalia fig Lindsey, etc.

Synonym. *aemilia* Skinner 1893: ♂ Oregon. Fig Holland: Wright fig 478.

B.M. 5 ♂ 2 ♀ California. 6 ♂ 2 ♀ Colorado. 1 ♂ New Mexico. 2 ♂ 1 ♀ Utah.

(c). Larger, ♂ F 17 mm. Like *mexicana*, but upf markings reduced, often to only the apical spots and an upper cell spot. Unh with an ochreous tinge, turning paler and becoming striated between the outer band and the termen. Cilia ochreous brown.

Sub-sp. **dobra** nov: ♂ Fort Grant, Arizona.

B.M. 18 ♂ 2 ♀ Arizona.

(d). ♂ F 17 mm. Upf markings more or less complete. Unh dark brown, outwardly whitened. Cilia whitish.

Sub-sp. **mexicana** Herrich-Schäffer 1869: ? loc. Fig Godman & Salvin, ♂ and genitalia: Comstock, pl 58/1 & 2 = *pylades*: Seitz, pl 171b (very bad): Wright fig 472 = *diversus*: Holland from Mexican specimens: Lindsey, etc., genitalia.

Synonym. *ananius* Plötz 1882 = *mexicana*, thought invalid.

B.M. 23 ♂ 14 ♀ Mexico.

(c). ♂ F 17 mm. Cuiller with a very broad straight face overlapping the valva. Wings more produced. Upf spots

C.20. CABARES

complete, except for the spot in space 1b. Unh uniform brown, bands irregular and white-haired. Cilia inconspicuously chequered light and dark brown.

Sub-sp. **ducia** nov: ♂ Panama: type B.M.

B.M. Only the type.

- 6 (3b). Cilia conspicuously chequered. Upf with spots in spaces 4 and 5, and remainder of spotting complete, cell spot across the cell. Unh with the usual alternate dark brown bands on a lighter ground, tornal quarter paler in ♂. ♂ F 23-25 mm.

**valeriana** Plötz 1882: Mexico: copy of MS fig in B.M. Seitz's copy of it, pl 170 e, is a caricature.

Synonyms. *valerius* Godman MS 1907 = *valeriana*.

*mysie* Dyar 1904: ♀ Arizona, Patagonia Mts. Fig Seitz. Holland.

*uvydira* Dyar 1914: ♂ Mexico. Fig Seitz. Possibly a sub-species.

B.M. 3 ♀ Mexico (N. Sonora).

**C.20. CABARES** Godman & Salvin 1894: type *potrillo* Lucas: fixed by author.

Differs from *Thorybes* in wing shape and facies. H produced at end of vein 4. Upf spots in spaces 1b and 2 approximate. Unh with dark bands.

- 1a (3). Upf spot in space 3, which is a dot, widely separated from the spot in space 2.

1 (2). Unh olive-brown with 2 dark bands. ♂ upf no costal fold. Termen F evenly convex.

**potrillo**. 2 sub-species.

(a). Upf markings conspicuous and complete. ♂ F 18 mm.

Sub-sp. **potrillo** Lucas 1857: Cuba. Fig G & S, ♂ and genitalia: Seitz.

Synonym. *paterculus* Herrich-Schäffer 1868: Cuba. Fig in Seitz is of *Quadrus zera*.

B.M. 28 ♂ 13 ♀ Mexico. 4 ♂ 4 ♀ Guatemala. 4 ♂ 1 ♀

Honduras. 3 ♂ 2 ♀ Costa Rica. 1 ♂ Salvador. 6 ♂ 2 ♀

Cuba. 2 ♂ Jamaica. 17 ♂ 2 ♀ Haiti. 1 ♂ "Bolivia".

(b). Upf markings more or less reduced: darker. ♂ F 17 mm.

Sub-sp. **reducta** Mabille & Boulet 1917: Venezuela.

B.M. 7 ♂ 2 ♀ Colombia. 11 ♂ 1 ♀ Venezuela. 4 ♂ 1 ♀ Trinidad. 2 ♂ 1 ♀ Panama.

2 (1). Unh very variegated: basal quarter whitish brown, with a small dark spot near base of space 7: remainder of wing light ferruginous with 2 irregular dark ferruginous bands. Upf cell spot continued to costa by a whitish, brown powdered spot: discal dots in spaces 3 and 5: apical spots in spaces 6 to 9. ♀ F 21 mm.: wings more produced and termen straight.

**elaites** Hewitson 1867: ♀ Minas Geraes: type B.M.

B.M. Only the type, without antennae.

3 (1a). Upf spot in space 3 as wide as the spot in space 2 and placed immediately above it: spot in space 1b just detached, nearer termen: cell spot rectangular and a double dot on the costa above it: 3 apical spots in spaces 6 to 8. Unh two angled dark bands on a grey powdered brown ground: outer band darker in centre and at each end. ♂ with costal fold. Wings produced, costa F straight. Cilia chequered. ♂ F 16 mm.

**rinta** nov: ♂ Tucuman, Argentine: J. Steinbach: type B.M.

B.M. Only the type, without antennae or palpi.

## Group D. CELAENORRHINUS

### ANALYSIS OF GENERA

This is the last group of the first section of the *Pyrginae*, with a long forewing cell and erect palpi. The palpi are not divergent as in the *Augiades* group and the wings are believed to be always flat in repose, not erect or erectile as in the *Urbanus* group.

Antennae generally half as long as the costa F, shorter in *Porphyrogenes*. Apiculus very long in *Bungalotis*, half as long as the shaft. In *Ablepsis* and some species of *Porphyrogenes* the club is very slender, hardly thicker than the shaft. In *Celaenorrhinus* the club is short, stout and obtuse.

Palpi abnormal in the *Bungalotis* sub-group: second and third segments very stout and the third segment not protruding or pointed. As in the *Urbanus* group for the rest.

Legs normal: very shaggy in *Bungalotis*.

F venation similar to the *Urbanus* group, except that veins 7 and 8 tend to be approximate, particularly in *Nascus*, instead of veins 6 and 7 being approximate as in the *Urbanus* group.

H vein 5 is usually well marked: vein 1A is very short in *Bungalotis*, but as long as vein 8 in *Celaenorrhinus*. The tornus is generally produced, less so in females: there is no tail or lobe, except in *Cephise*. The wing is quadrate and not produced at the tornus in *Celaenorrhinus*.

Secondary sexual characters. Usually a costal fold upf. Tibial hair tufts, of a recumbent nature in *Cephise*: erectile and entering a thoracic pouch in the last 2 genera. Hair tufts upf in *Porphyrogenes*, correlated to a polished area unf. Specialised scales and more or less developed hair tufts near the base of the abdominal fold unh. Characters in the abdominal fold unh in *Nascus* and *Ablepsis*.

Facies various. Sexual dimorphism is an outstanding feature in the *Bungalotis* and *Nascus* sub-groups.



The group is distributed throughout the tropical regions of the world. The *Bungalotis* sub-group appear to be related to the genera *Capila* of the Oriental region and *Chaetocneme* of the Papuan region, while *Celaenorrhinus* is the only tropical genus occurring unchanged in America, Africa and the Oriental region.

- 1a (5a). Palpi, 3rd segment short, stout, round-ended, not protruding above clothing of 2nd segment, which is stout, quadrantic. Antennae =  $\frac{1}{2}$  costa. Legs shaggy.

### **Bungalotis Sub-group.**

- 1b (4). Antennae bent at beginning of nudum.

- 1 (2a). Antennae constricted at beginning of nudum, which is very long, 33 segments. ♂ with a costal fold.

**Bungalotis.** 7 species. Mexico—S. Brazil.

- 2a (1). Antennae not constricted before apiculus.

- 2 (3). Antennae barely thickened at beginning of apiculus: nudum 24. Typically H not produced nor lobed: vein 1A is > abdomen, but < vein 8. Usually with a costal fold.

**Salatis** nov: type *Papilio salatis* Stoll. 7 species. Nicaragua—S. Brazil.

- 3 (2). Antennae conspicuously thickened at beginning of apiculus: nudum 29. H produced at tornus and lobed: vein 1A = abdomen and > vein 8. ♂ with costal fold.

**Sarmientoia.** 3 species. Columbia—Argentina.

- 4 (1b). Antennae angled well after beginning of nudum, which usually has 12 segments on the club and 23 on the apiculus. H produced, but not lobed. ♂ with a costal fold.

**Dyscophellus.** 9 species. Mexico—Paraguay.

- 5a (1a). Palpi 3rd segment stout, conical, bluntly pointed, protruding above clothing of 2nd segment, which is cylindrical.

- 5b (7a. 10a). Antennae bent to apiculus beyond the thickest part of the club, which is well formed: apiculus shorter than club. ♂ with long costal fold.

**Nascus Sub-group**

- 5 (6). H produced, but not lobed. ♂ unh vein 1b in a deep groove to mid wing, where there is a small tuft on the costal side of the groove. F always with 4 apical spots in spaces 6 to 9. Uncus tapered, undivided. Nudum 9/17.  
**Nascus.** 6 species. Mexico—Paraguay.

- 6 (5). H strongly lobed at tornus. ♂ with a recumbent hair tuft on the hind tibiae. Uncus very broad-ended and furnished at back with a tuft of snow-white hairs. F only 3 apical spots, in spaces 6 to 8. Nudum 4/20.

**Cephise** nov: type *Goniurus cephise* Herrich-Schäffer.  
1 species. Honduras—Paraguay.

- 7a (5b. 10a). Antennae arcuate or hooked, bent about the thickest part of the club, which is generally long and slender: nudum 23 to 25 segments.

**Porphyrogenes Sub-group**

- 7b (9). Antennae  $< \frac{1}{2}$  costa. F without apical spots. ♂ generally with a costal fold: uph with a hair tuft above cell, correlated to a polished area unf.

- 7 (8). F apex not truncate. Sexes dimorphic.

**Porphyrogenes.** 14 species. Costa Rica—Bolivia.

- 8 (7). F apex truncate. Sexes alike.

**Ocyba.** 1 species. Mexico—Amazons.

- 9 (7b). Antennae at least  $= \frac{1}{2}$  costa. F with apical and discal hyaline spots. Sexes alike. ♂ no costal fold: unh the basal part of the abdominal fold contains specialised scales covered by an erectile hair tuft.

**Ablepsis.** 4 species. Columbia—S. Brazil.

- 10a (5b. 7a). Antennae obtuse from beginning of the stout club: length  $= \frac{1}{2}$  costa. ♂ hind tibiae with a hair pencil fitting into a pouch at the end of the thorax, a frequent feature in the subsequent groups of the *Pyrginae*: no costal fold.

### **Celaenorrhinus Sub-group**

10 (11). H produced in ♂. Nudum 18 segments.

**Orneates.** 2 species. Costa Rica—Amazons.

11 (10). H not produced at tornus: quadrate, broadly angled mid termen: dorsum = costa.

**Celaenorrhinus.** 14 species. Mexico—Argentina.

The creation of the two new genera, *Salatis* and *Cephise*, appears to be justified on the characters specified.

*Porphyrogenes* does not seem to be a satisfactory genus, but no basis for separating the females has been found.

The yellow banded species included in *Celaenorrhinus* have been hitherto placed in the genus *Ancistrocampta* and in America their separation from *Celaenorrhinus* could very well be justified because of the longer antennae and the more basal position of the origin of vein 3 F. But both in Africa and in the Oriental region there are yellow banded as well as white spotted species. In Africa there is no structural difference. In the Oriental region yellow marked species (banded or spotted) have the venational but not the antennal difference. For uniformity it is considered preferable to place the yellow banded American species in the genus *Celaenorrhinus*.

### **ANALYSIS OF SPECIES**

**D.I. BUNGALOTIS** Watson 1893: type *midas* Cramer: fixed by author.

Distinguished by the very long antennal apiculus, which is constricted at its commencement and whereon lies the entire nudum of 33 segments. ♂ always with a costal fold. Tibiae densely fringed. Uncus generally broad: gnathos well formed and bifid into two pads: clasp furnished with a style. A compact genus.

1a (3a). ♀ uph and upf with conspicuous hyaline spots of the "*sebaldis*" type; central spots upf widely separated.

## D.I. BUNGALOTIS

Below cheeks white as well as the inner half of the first segment of the palpi.

1 (2). ♂ with hyaline spots as in the ♀. Antennal shaft inwardly white, a unique feature. Cilia H conspicuously chequered. Upf with 3 conspicuous hyaline spots in spaces 6, 7 and 8: dot in space 4 often present, none in space 5. ♂ F 31 mm.: ♀ 38 mm.

**erythus** Cramer 1775: ♀ Surinam: figured. Fig Seitz ♂.

Synonym. *muretus* Fabricius 1793: Indies: figured Jones Icones.

B.M. 1 ♂ 2 ♀ Honduras. 2 ♀ Nicaragua. 4 ♂ Colombia. 2 ♂ 1 ♀ Fr Guiana. 1 ♂ Br Guiana. 13 ♂ 17 ♀ Pará. 1 ♂ Maranh.

2 (1). ♂ without hyaline spots: above brownish ochreous, exactly resembling *Dyscophellus erythras* ♂, except that the dark markings are fainter or absent above, and below, they are whiter. The ♀ resembles the ♀ of *erythras*, but is browner, like *erythus*, while the apical spots are smaller and are continued into spaces 5 and 4. The antennae are as for the genus generally: ♂ brown above, ochreous below, slightly whitened at the point of constriction for the apiculus: ♀ ochreous, conspicuously ringed white or pale yellow before the apiculus. ♂ F 25 mm.: ♀ 27 mm.

**diophorus** Möschler 1882: ♂ Surinam. This is not the wrongly spelt *diaphorus* of Mabilie & Boulet 1912, which pertains to *Dyscophellus*.

B.M. 2 ♂ Fr Guiana. 3 ♂ 5 ♀ Pará. 1 ♂ Pernambuco. 1 ♂ 1 ♀ Brazil.

3a (1a). ♀ uph unmarked: upf central hyaline markings as a band from space 1b to cell, with a detached, but approximate, spot in space 3. ♂ tawny with dark markings, no hyaline spots.

3b (5a). ♂ uph the dark brown costa brilliantly shot blue in a side-light. ♀ upf apical spots feebly developed or absent.

3 (4). ♀ below, cheeks and inner half of first segment of palpi white. ♂ above, dark markings narrow: unf dark post-discal band reaches space 1b. ♀ unh, dark markings narrow and separated into spots. ♂ F 30 mm.: ♀ 36 mm.



**midas** Cramer 1775: ♂ Surinam: figured. The figures in Seitz are of *astylos*. Genitalia fig G & S, but the style of the clasp has been omitted in the figure.

Synonyms. *rhetus* Fabricius 1781: ♂ Surinam: a homonym.

*corentinus* Plötz 1882: ♂ Surinam.

*adrasstor* Mabilbe & Boulet 1912: ♀ S. America: figured. Fig Seitz. An aberration without the spot in space 3 upf. B.M. 1 ♀ Mexico. 10 ♂ 3 ♀ Honduras. 2 ♂ 3 ♀ Venezuela. 1 ♂ 1 ♀ Trinidad. 1 ♂ 4 ♀ Br Guiana. 1 ♂ 1 ♀ Surinam. 10 ♂ 6 ♀ Fr Guiana. 3 ♂ 1 ♀ Peru (Chanchamayo. Amazonas, Carabaya). 1 ♂ Bolivia (Salampiona). 2 ♂ 1 ♀ Up Amazons (Tapajos). 1 ♂ 1 ♀ Pará. 1 ♂ Maranhão. 1 ♂ Goyaz. 1 ♀ Pernambuco. 4 ♂ 1 ♀ S. Brazil (Rio. São Paulo). 3 ♂ 3 ♀ Paraguay.

- 4 (3). ♂ ♀ below, cheek only white at base, remainder and whole of palpi tawny in ♂, brown in ♀. ♂ above, dark markings broader and more pronounced: unf dark post-discal band not extending below vein 3. Unh dark markings large and confluent. ♂ F 32 mm.: ♀ 39 mm.

**astylos** Cramer 1780: ♀ Surinam: figured. Fig in Seitz as *midas*.

B.M. 1 ♂ Honduras. 1 ♂ Costa Rica. 1 ♂ 1 ♀ Panama. 2 ♂ 1 ♀ Colombia. 4 ♂ 2 ♀ Venezuela. 2 ♂ Trinidad. 1 ♂ 1 ♀ Br Guiana. 2 ♂ 2 ♀ Fr Guiana. 1 ♂ Ecuador. 7 ♂ 5 ♀ Peru (Amazonas. Carabaya. Chanchamayo. Rentema Falls). 1 ♂ 1 ♀ Up Amazons (Ega). 11 ♂ 11 ♀ Pará and Manaus. 1 ♂ Matto Grosso. 10 ♂ 4 ♀ S. Brazil (Rio. Petropolis).

- 5a (3b). ♂ uph costa not shot blue. Below cheeks and part of palpi white as in *midas*.

5 (6a). ♂ upf dark bar in cell broad and conjoined to the inner edge of the dark discal spot in space 2: otherwise as *quadratum*, but wings more produced. ♀ as *midas*, but upf with 3 well-marked apical spots and 2 spots in space 1b: unf dorsum whitish, but termen beyond the spots in space 1b dark brown instead of white as in *midas*: unh spots grey. ♂ F 28 mm.: ♀ 33 mm.

D.1. BUNGALOTIS

**borax.** 2 sub-species.

(a). Above and below, ♂ tawny red.

Sub-sp. **borax** nov: ♂ French Guiana: type B.M.

B.M. 1 ♀ Br Guiana. 3 ♂ Fr Guiana. 1 ♂ 2 ♀ Amazons (Fonte Boa. Ega. Pará).

(b). ♂ above, suffused dark brown, the tawny colour being confined to broad edges to the discal bands.

Sub-sp. **lactos** nov: ♂ Peru, Chanchamayo: type B.M.

B.M. Only the type.

6a (5). ♂ upf dark bar in cell widely separated from the spot in space 2.

6 (7). Unh the dark markings broad and confluent. ♀ upf white band as in *midas* and *borax*, but there are no apical spots and the spot in space 3 is narrow and widely detached. Unh ♀ is readily recognisable by the large square black cell spot conjoined to the spot in space 1c.

♂ F 25 mm.

**quadratum.** 2 sub-species.

(a). ♂ above and below yellow, causing the dark markings to be very conspicuous: upf costa broadly dark brown. ♀ unh all markings black.

Sub-sp. **quadratum** Sepp 1848: ♂ Surinam: figured.

Synonym. *annulicornis* Möschler 1876: ♀ ? loc. Fig Seitz.

B.M. 1 ♂ 1 ♀ Honduras. 2 ♂ Colombia (Rio Dagua). 1 ♂ Br Guiana. 2 ♀ Surinam.

(b). ♂ above and below dark tawny. ♀ unh the central spot in space 1c and the discal spots more or less grey scaled. ♂ upf costa typically dark brown only below vein 7 near the termen, but often the dark area is more extensive.

Sub-sp. **barba** nov: ♂ Pará, bred by A. Miles Moss, May 1929: type B.M.

B.M. 3 ♂ 3 ♀ Fr Guiana. 1 ♂ Peru (Amazonas, Cavallo Cocha). 1 ♀ Santarem. 16 ♂. 14 ♀ Pará.

7 (6). Unh spots small and separated. ♂ tawny, with well-marked spots as in *quadratum*, but smaller: uph costa broadly dark brown to vein 7 and cell spot conspicuous (faint in *quadratum*): unf browner to the pale yellowish

dorsum, dark markings faint: unh dorsum yellowish, rest of wing outwardly brown up to the discal spots, which with the central spots are well marked, very regular and not pale centred. ♀ very distinct. Above brownish tawny: narrow, regular, central hyaline band upf from space 1b to across cell (spot in space 2 outwardly excavate) and a lower hyaline (or dark) dot in space 1b: a detached dark dot in space 3 and a curved regular row of small dark apical spots in spaces 4 to 7 (upper two may be white centred). Uph dark markings faint or absent. Unf as upf but browner and dorsum pale brownish. Unh brown with spots as in the ♂: all the spots may be dark and somewhat suffused, but more usually the majority of the spots are whitish. ♂ F 24 mm.: ♀ 26 mm.

**clusia** nov: ♂ Pará, bred by A. Miles Moss, December 1938, on *Clusia*.

B.M. 1 ♀ Br Guiana. 1 ♂ Up Amazons (Ega). 11 ♂ 11 ♀ Pará.

**D.2. SALATIS** Evans (page 135 *ante*): type *salatis* Stoll: fixed by author.

Allied to *Bungalotis*, *Sarmientoia* and *Dyscophellus*, differing in having the tornus H more rounded, vein 1A longer than the abdomen. The antenna is bent at the beginning of the nudum, where it is not constricted as in *Bungalotis*, nor thickened as in *Sarmientoia*, while in *Dyscophellus* it is bent well after the beginning of the nudum. Gnathos well developed and bifid as in *Bungalotis*. ♂ with costal fold in first 3 species.

1a (6). Unh without broad pale submarginal markings.

1b (4a). Below cheeks conspicuously white, palpi tawny. ♂ above brownish tawny or brownish ochreous: upf clothed with long hairs, most developed in *cebrenus*. ♀ dark brown with white hyaline spots. Wings broad in both sexes: apex F and tornus H not produced.

1c (3). ♂ upf normally with a single apical spot, in space 6, occasionally reduced to a black spot and occasionally there is a dot in space 7.

D.2. SALATIS

1 (2). ♀ upf central hyaline spots in spaces 1b, 2 and cell in line as a band: widely detached spot in space 3: uph with hyaline spots in spaces 2 and 3. ♂ upf no hyaline spots other than the spot in space 6: conspicuous dark marking in cell and on disc upf and uph. Unh small dark spots, usually grey centred. ♂ F 30 mm.: ♀ 34 mm.

**canalis** Skinner 1920: ♂ Panama.

B.M. 4 ♂ Panama. 1 ♀ Colombia. 2 ♀ Ecuador (Paramba).

2 (1). ♀ upf white hyaline spots wide apart. ♂ varies from unmarked tawny above, with obscure dark markings to having as many hyaline spots as the ♀, including 1 or 2 uph. Unh spots dark or grey. ♂ F 27 mm.: ♀ 30 mm.

**salatis** Stoll 1782: ♂ Surinam: figured. Fig G & S ♂ genitalia: ♂ fig Seitz: Hayward 1948, ♂ ♀.

Synonyms. *pelignus* Hewitson 1867: ♂ Rio: type B.M.

*gonatas* Hewitson 1867: ♀ Amazons: type B.M.

*sebrus* Felder 1867: ♂ Bahia: type B.M. Fig Seitz ♂, ♀.

*ophiuchus* Plötz 1882: ♂ Surinam.

*sapucayae* Jorgensen 1935: ♂ Paraguay.

B.M. 1 ♀ Nicaragua. 1 ♀ Panama. 2 ♀ Colombia. 4 ♂ 1 ♀ Trinidad. 1 ♂ 1 ♀ Br Guiana. 1 ♀ Surinam. 7 ♂ 2 ♀ Fr Guiana. 4 ♂ 3 ♀ Up Amazons (Tapajos. Ega. St Paulo d'Olivencia. Cavallo Cocha). 6 ♂ 7 ♀ Pará. 3 ♀ Maranhão. 1 ♂ Bahia. 5 ♂ 2 ♀ S. Brazil (Rio. Petropolis. Espirito Santo. Theresopolis).

3 (1c). ♂ upf with 2 or 3 conspicuous apical spots and discal spots in spaces 1b, 2 and 3. ♀ upf central spots banded as *canalis*, but the spot in space 3 is minute. ♂ F 25 mm: ♀ 30 mm.

**cebreus** Cramer 1777: ♂ Surinam: figured. Fig Seitz.

Synonyms. *mutius* Plötz 1882: ♂ Colombia.

*gildo* Mabilbe 1888: ♂ Coary.

B.M. 4 ♂ 5 ♀ S. Brazil (Espirito Santo. Petropolis).

4a (1b). Below, cheeks and palpi tawny. ♂ above, fulvous red. 4 (5). Upf with single apical spot. No costal fold upf, ♂ above and below, with broad (2 mm.) brown border to both wings: upf with conspicuous hyaline spots in spaces



2, 3 and cell and there may be 2 dark or hyaline spots in space 1b: uph with the usual dark spots which are more conspicuous below. ♀ generally like ♂, but the dark borders are absent: typically the spot in space 2 and the cell spot are conjoined, but a specimen from the Rio Faro has them widely separated, as has another specimen from Iquitos which is also peculiar in being brown instead of tawny. ♂ F 25 mm.

**fulvius** Plötz 1882: ♂ Cameta. Fig Seitz.

B.M. 1 ♀ Fr Guiana. 2 ♂ Peru (Amazonas, Cavallo Cocha).

1 ♂ 2 ♀ Up Amazons (Villa Nova. Rio Faro. Iquitos).

2 ♂ 2 ♀ Pará.

**5** (4). ♂ Upf with apical spots in spaces 5 to 8 and hyaline spots in spaces 2 and 3: black spots in cell and space 1b: outer half of wing browner. Uph black spots on disc and in cell, as usual and costa dark brown. Unh outer third darkened, black spots as usual, pale centred. ♂ F 24 mm.

**syrus** Bell 1934: ♂ Yumboto, Peru: genitalia figured.

B.M. None.

**6** (1a). Below with a broad grey submarginal band on both wings, divided by dark veins: unh a similar central band and 4 pale spots towards base. Above dark brown: upf with discal hyaline white spots in spaces 1b, 2 and 3 and 3 apical spots. Cilia of both wings yellow. Bred on *Citrus*. ♂ F 23 mm.

**flavomarginatus** Sepp 1848: Surinam: figured.

B.M. None.

**D.3. SARMIENTOIA** Berg 1897: type *phaselis* Hewitson: fixed by author as *faustinus* Burmeister, which is a subspecies of *phaselis*.

Differs from *Bungalotis* in having the antennal apiculus conspicuously thickened after its commencement. Wings produced. ♂ with a costal fold.

**1a** (3). ♂ ♀ Upf with hyaline spots. Antennae white ringed before apiculus.

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- 1 (2). Upf with conspicuous hyaline spots in spaces 4 and 5. Cilia more or less conspicuously chequered.

**phaselis.** 3 sub-species.

- (a). Above ochreous brown. Unh with white spots. ♂ F 26 mm.

Sub-sp. **phaselis** Hewitson 1867: ♂ Brazil: type B.M.

Synonym. *coenosa* Möschler 1878: ♂ Venezuela.

B.M. 4 ♂ 3 ♀ Colombia. 9 ♂ 6 ♀ Venezuela. 1 ♂ 1 ♀ Peru (Perene. La Merced). 4 ♂ 1 ♀ Bahia. 2 ♂ 4 ♀ Goyaz. 3 ♂ 1 ♀ Matto Grosso.

- (b). Above grey-brown. Unh with dark spots. ♂ F 25 mm.

Sub-sp. **faustinus** Burmeister 1878: ♀ Argentine: figured.

Fig Seitz as *phaselis*: Hayward 1948, ♂ and genitalia.

B.M. 1 ♂ Bolivia (Bueyes). 6 ♂ 4 ♀ Matto Grosso (Chapada. Nivac). 1 ♀ Argentine (Tucuman).

- (c). Above grey-brown. Unh with white spots. ♂ F 22 mm.

Sub-sp. **ocellata** Hayward 1933: ♂ Argentine: figured. Fig Hayward 1948, ♂ and genitalia.

B.M. 1 ♂ 1 ♀ Paraguay. 8 ♂ 5 ♀ Argentine (Tucuman. La Rioja. Catamarca. Gran Chaco).

- 2 (1). Upf without hyaline spots (rarely dots) in spaces 4 and 5. Cilia not chequered. ♂ ♀ dark brown. ♂ upf spots small; generally, upper spot in space 1b: 2 spots in space 2: narrow spot across space 3 and a similar widely separated spot across cell: apical spots in spaces 6 (nearer termen), 7 (often reduced) and 8 (in line with the preceding). ♀ upf with a central band of large spots in spaces 1b, 2 and cell, followed by a detached spot on the costa, which, unf, is conjoined to the cell spot: minute detached dot in space 3: 3 conspicuous apical spots. Unh with small grey spots, arranged as usual. ♂ F 26 mm.

**eripis** Hewitson 1867: ♂ Amazons: type B.M.

Synonym. *lucca* Plötz 1882: ♀ S. America. Fig Seitz.

B.M. 2 ♂ Fr Guiana. 2 ♂ Surinam. 16 ♂ 15 ♀ Pará.

- 3 (1a). ♂ upf without hyaline spots. Antennae not white before apiculus. Above dark ochreous brown: upf with the usual, rather obscure dark discal spots and cell spot,

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beyond which the wing is brown. Uph the dark discal spots and the cell spot well marked, costa broadly dark brown. Unf as upf: dark spots better marked: dorsum pale brown. Unh ochreous, turning brown beyond the discal spots, which, with the usual central and basal spots, are well marked, and some of them are grey centred.

♂ F 30 mm.

**dinka** nov: ♂ no loc: type B.M.

B.M. Only the type.

**D.4. DYSCOPHELLUS** Godman & Salvin 1893: type *sebalus* Stoll: fixed by authors; to replace *Dyscophus*.

Synonym. *Dyscophus* Burmeister 1878: type *sebalus* Stoll. Homonym by Grandidier 1872.

Distinguished from its allies, *Bungalotis* etc., by the club being bent to the apiculus well after the beginning of the nudum, and apiculus = the rest of the club. The antennae are whitish at the beginning of the nudum and the shaft is more or less chequered. Uncus slender, pointed: gnathos typically ill-developed. ♂ always with a costal fold.

**1a (4a).** Upf without any trace of a sub-basal dark spot in space 1b. Gnathos developed but not bifid.

**1 (2a).** ♂ ♀ above and below with insignificant small pale discal spots, some of which may be absent and some may be hyaline. ♂ F 30 mm.

**nicephorus** Hewitson 1876: ♂ Amazons: type B.M. Fig in Seitz.

Synonym. *dexo* Mabille 1888: ♂ Chiriqui: figured. Fig G & S, ♂ ♀ and genitalia.

B.M. 1 ♂ Mexico. 3 ♂ 3 ♀ Honduras. 1 ♂ Panama. 1 ♂ Fr Guiana. 1 ♂ Peru (Amazonas). 1 ♂ Upper Amazons. 2 ♂ 3 ♀ Pará. 1 ♂ Maranhão.

**2a (1).** ♂ ♀ with hyaline spots upf, yellow in ♂, white in ♀. ♂ upf the costal fold peculiar, short and broad, covering a densely packed comb of rather long hairs.

**2 (3).** Cuiller of clasp slender, pointed: valva produced as a style. ♂ upf the hyaline spots in spaces 2, 3 and cell

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large and crowded together: 2 conspicuous apical spots in spaces 6 and 7. ♀ with the central spots variable, may be crowded together or widely separated: usually a small upper spot in space 1b.

**phraxanor.** 3 sub-species.

(a). Redder than *phraxanor* and the discal spots larger: minute dots in spaces 4 and 5. Uph with a small hyaline spot in space 3. Back of cuiller of clasp strongly shouldered. ♂ F 30 mm.

Sub-sp. **lama** nov: ♂ Cayuga, Guatemala: March: Schaus and Barnes: type B.M.

B.M. 1 ♂ Guatemala. 2 ♂ Honduras.

(b). Back of cuiller not, or only faintly, shouldered. ♂ F 30 mm.: ♀ 32 mm.

Sub-sp. **phraxanor** Hewitson 1876: ♂ Colombia. Fig Seitz. Synonym. *heras* Mabilie 1888: ♂ Venezuela: figured. Fig G & S, ♂ ♀, and ♂ genitalia.

B.M. 1 ♀ Nicaragua. 2 ♂ 1 ♀ Costa Rica. 6 ♂ 1 ♀ Panama. 4 ♂ 2 ♀ Colombia. 1 ♂ Ecuador (La Chima).

(c). Large, ♂ F 38 mm.: ♀ 41 mm. ♂ upf spots large, as in *lama* and with a spot in space 1b. ♀ upf spots in space 2 and cell wide apart: spot in space 3 narrow and approximate to spot in space 2. Wings broad and less produced.

Sub-sp. **mena** nov: ♂ Ecuador: type B.M.

B.M. 1 ♂ 1 ♀ Ecuador (ex coll Hewitson). 1 ♂ Ecuador (Zamora).

**3** (2). Cuiller of clasp with a large, inwardly projecting process, which is conspicuously spined: valva not produced to a style. Though the genitalia are so different, *marian* is superficially exactly like *phraxanor mena* and they fly together in Ecuador. ♀ has the 3 central spots upf crowded together as in the ♂ and the spots are pale yellow. ♂ F 36 mm.: ♀ 40 mm.

**marian** nov: ♂ Zamora, Ecuador: 3,000-4,000 ft.: O. T. Barron.

B.M. 2 ♂ Ecuador (Zamora). 1 ♂ Ecuador. 2 ♂ 2 ♀ Peru (Perene. El Porvenir. Ucayali). 1 ♂ Up Amazons (St Paulo d'Olivencia).



- 4a (1a). Upf with 2 more or less well marked dark spots (rarely pale centred) at the basal third of space 1b: a useful distinguishing feature for similar species in *Bungalotis* etc.
- 4 (5a). ♂ upf with 3 large yellow central spots crowded together as in *phraxanor* and with 2 or 3 apical spots: dark or hyaline small discal spots in space 1b present or absent: wing brown beyond the discal spots. ♀ upf the white central spots crowded together or separate: cell spot continued to costa, a feature shared only with *Sarmientoia eriopis* in the *Bungalotis* group. Some variation in the shape of the cuiller: gnathos well developed as in the preceding species. ♂ costal fold longer than in *phraxanor*, but filled with shorter dense hairs and not, as in the rest of the group, with silvery scales and grey powder. ♂ F 28 mm.

**euribates.** 2 sub-species.

(a). Uph without hyaline spots.

Sub-sp. **euribates** Stoll 1782: ♀ Surinam: figured. Fig Seitz ♂ ♀ as *hesus*.

Synonyms. *nicias* Fabricius 1787: ♂ Fr Guiana.

*hesus* Westwood 1852: ♂ Pará: type B.M.

*etias* Hewitson 1867: ♀ Amazons: type B.M.

*gaurus* Plötz 1882: ♂ Rio Negro.

*tychios* Plötz 1882: ♀ Bahia.

B.M. 1 ♂ Costa Rica. 2 ♂ 2 ♀ Colombia. 4 ♂ Br Guiana.

3 ♂ Surinam. 10 ♂ 6 ♀ Fr Guiana. 6 ♂ Ecuador (Zamora).

9 ♂ Peru (Amazonas. Perene. Inambari. Ucayali. Yahuar-mayo).

5 ♂ Bolivia (Santa Cruz. San Jacinto. Farinas, La Paz. Buenavista).

14 ♂ 13 ♀ Up Amazons. 15 ♂

14 ♀ Pará. 2 ♂ Maranhão.

(b). Uph with hyaline spots in spaces 2, 3 and cell.

Sub-sp. **polygius** Latreille 1824: ♀ ? loc: type B.M. Fig Mabil-le & Boulet 1912, ♂ ♀: Seitz ♂ ♀.

B.M. 5 ♂ 1 ♀ S. Brazil (Espírito Santo. Santos. Corcovado).

- 5a (4). ♂ upf without large central spots crowded together. Gnathos feebly developed.

5b (7a). ♂ upf with at least a well marked hyaline cell spot.

♂ fulvous red, termen H angled at end of vein 2. ♀ brown.

5 (6). ♂ ♀ termen broadly brown beyond the discal spots

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upf and uph. Uph discal band regular. ♀ upf spots in space 2 and cell with their inner edge in line. ♂ F 27 mm.

##### **porcius.** 2 sub-species.

(a). ♂, the only hyaline spot is normally at the end of the cell F and H: latter sometimes absent and upf some of the dark spots may have minute pale centres.

Sub-sp. **porcius** Felder 1862: ♂ Brazil: type B.M. Fig G & S, genitalia as *doriscus*: Hayward 1948, ♂ ♀ and genitalia. B.M. 1 ♂ Costa Rica. 5 ♂ 4 ♀ Panama. 20 ♂ Colombia. 3 ♂ 1 ♀ Fr Guiana. 4 ♂ Surinam. 32 ♂ Peru (Chanchamayo. Perene. Pozuzo. Inambari. Rentema Falls). 8 ♂ Bolivia (Cochabamba. Salampioni. Farinas). 5 ♂ Up Amazons (Iquitos. Pebas. St Paulo d'Olivencia). 2 ♂ 1 ♀ Pará. 2 ♂ Pernambuco. 8 ♂ 1 ♀ Matto Grosso.

(b). ♂ upf usually with a single or double hyaline spot in space 2 and often with well marked spots in spaces 1b, 3 and at apex.

Sub-sp. **doriscus** Hewitson 1867: ♀ Rio: figured by Westwood 1852 as *sebalus*: type B.M.

Synonym. *coecutiens* Herrich-Schäffer 1869: ♂ no loc: type B.M.

B.M. 11 ♂ 1 ♀ S. Brazil (Rio. Parana. Espirito Santo). 2 ♂ Paraguay.

6 (5). ♂ ♀ above termen concolorous with rest of wings. Uph discal spots irregular, centres of spots in spaces 2, 3, 4 and 5 not in line. ♂ upf with 3 widely separated central spots in spaces 2, 3 and cell: inner and outer double dark spot in space 1b: apical spots faint, but may be hyaline: uph with a large hyaline cell spot and the discal spots more or less hyaline. ♀ similar to ♂, but most of the spots are hyaline and larger: below, the discal spots are outwardly edged by a violet band followed by a brown band and then, up to the termen, by a broader band of the ground colour. ♂ F 26 mm.: ♀ 33 mm.

**sebalus** Stoll 1781: ♀ Surinam: figured. Fig Seitz.

Synonym. *cramer* Latreille 1824, to replace *sebalus*, wrongly believed to be a homonym.

B.M. 1 ♂ Venezuela. 1 ♂ 4 ♀ Fr Guiana. 2 ♀ Surinam. 1 ♂ Up Amazons (Pebas). 10 ♂ 11 ♀ Pará.

**7a (5b).** ♂ upf without a conspicuous hyaline cell spot.

7 (8a). Uph discal spots irregular as in *sebalus*. ♂ ♀ fulvous red: ♂ with small dark markings: ♀ with large hyaline spots resembling *sebalus*, but without the violet and brown borders beyond the discal spots, below. ♂ F 23 mm.: ♀ 26 mm.

**erythras** Mabilles 1888: ♂ Amazons: figured, but the figure of the ♀ is of a ♂ of *Bungalotis sebrus*.

Synonym. *tarquinius* Bell 1940: ♂ Ucayali: genitalia figured. B.M. 1 ♂ Fr. Guiana. 1 ♀ Surinam. 1 ♂ Bolivia (Mapiri). 6 ♂ 5 ♀ Up Amazons (Tapajos. Ega. Villa Nova. Tefte). 1 ♂ 1 ♀ Pará. 1 ♂ Brazil.

**8a (7).** Uph the discal spots regular, centres in line. ♀ upf spots in spaces 1b, 2 and cell with their centres not in line.

8 (9). ♂ uph at the costa, with a conspicuous black spot at the extreme base of space 8 followed by a broad shining white area for about half-way to the apex. ♂ above fulvous red with small dark spots as usual, which may be grey centred unh. ♀ above reddish brown, marked as in *porcius* ♀, but the central spots are widely separated. ♂ ♀ cilia comparatively conspicuously chequered. ♂ F 26 mm.: ♀ 35 mm.

**diaphorus** Mabilles & Boulet 1912: ♂ Surinam: figured. Fig. Seitz.

B.M. 2 ♀ Colombia (Muzo, Rio Negro). 1 ♂ Fr Guiana. 1 ♂ Up Putumayo, Florida. 2 ♂ 1 ♀ Pará.

**9 (8).** ♂ uph costa black with a narrow whitish stripe over and against vein 8 from base to apex. ♂ much browner: ♀ brown.

**ramusis.** 4 sub-species.

(a). ♂ reddish brown. H termen curved, angled at end of vein 2. ♀ upf with a prominent hyaline cell spot, spots in spaces 2 and 3, and 3 apical spots: like *diaphorus*, but no reddish tinge. Cuiller of clasp tapered. ♂ F 26 mm.: ♀ 29 mm.

Sub-sp. **ramon** nov: ♂ Bugaba, Panama: type B.M.: fig G & S, ♂ and genitalia as *ramusis*. Fig Seitz as *ramusis*.

B.M. 1 ♂ 2 ♀ Honduras. 3 ♂ Panama. 1 ♂ "Peru".



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(b). ♂ ochreous brown. ♀ without hyaline apical spots. ♂ wings produced, termen H straight and angled at end of vein 2. Cuiller of clasp broad ended and variable. ♂ F 26 mm.: ♀ 30 mm.

Sub-sp. **astrapaeus** Hewitson 1876: ♀ Villa Nova, Pará: type B.M. Fig G & S, ♀ as *ramusis*.

Synonym. ? *porsena* Bell 1934: ♂ Peru: genitalia figured. B.M. 2 ♂ Trinidad. 2 ♂ Br Guiana. 2 ♂ 1 ♀ Fr Guiana. 1 ♂ Ecuador (Paramba). 8 ♂ 11 ♀ Lower Amazons.

(c). Similar, but larger, ♂ F 30 mm.: ♀ 35 mm. Wings broad: H termen rounded, not angled at end of vein 2.

Sub-sp. **ramusis** Stoll 1781: ♀ Surinam: figured. G & S and Seitz figures of ♂ = *ramon*: of ♀ = *astrapaeus*.

B.M. 2 ♀ Colombia. 1 ♂ Ecuador (Zamora). 25 ♂ 5 ♀ Peru (Chanchamayo. Huancabamba. Tarapote. Inambari). 4 ♂ 1 ♀ Bolivia. 3 ♂ 2 ♀ Up Amazons (Ega. Pebas. Tapajos).

(c). Like *astrapaeus* but paler, wing shape of *ramon*. Cuiller at end broader and divided, due to the inner edge not being folded over as in *ramusis* and *astrapaeus*. ♂ F 25 mm.: ♀ 30 mm.

Sub-sp. **damias** Plötz 1882: ♂ Brazil.

B.M. 5 ♂ 1 ♀ S. Brazil (Espírito Santo. Theresopolis. Panama). 4 ♂ 1 ♀ Paraguay.

**D.5. NASCUS** Watson 1893: type *phocus* Cramer: fixed by author. As here restricted the genus is compact and is characterised by the 4 (or more) apical spots upf in spaces 6, 7, 8 and 9. The ♂ always has a costal fold and unh vein 1b is grooved from the base to mid wing in a channel between vein 1a and mid space 1b, and at the end of the groove there is a short overlying hair tuft from the inner edge of the channel. The tibiae are fringed, more densely in the ♂ than in the ♀.

1a (3a). Upf the spot in space 9 conspicuously shifted in, out of line with the rest.

1 (2). Upf spots in spaces 7, 8, 9 separate and equidistant. ♂ ♀ upf central spots in spaces 2, 3 and cell wide apart.



♀ unh outer half of wing solid dark brown. ♂ ♀ uph tawny, except in a ♀ from Fr Guiana, which is plain brown. ♂ F 29 mm.: ♀ 35 mm.

**phintias** Schaus 1913: ♂ Costa Rica. ♀ fig G & S, plate 112/11.12 as *phocus* var. Fig by Hayward 1948 is of *phocus*. Synonym. *mackeyi* Williams 1933: ♂ C. America: figured ♂ ♀.

B.M. 3 ♀ Panama. 1 ♀ Ecuador (Zamora). 1 ♂ 1 ♀ Fr Guiana. 3 ♂ Peru (Chanchamayo. Ucayali).

**2** (1). Upf spots in spaces 7, 8, approximate or overlapping, well separated from the spot in space 9. ♂ upf central spots crowded together and overlapping: in ♀ wide apart. ♀ unh always signs on the dark brown border, of the ochreous edging to the discal band, which is separated from the dark border in the ♂. ♂ ♀ uph varying from brown to tawny. ♂ F 27 mm.: ♀ 30 mm.

**phocus** Cramer 1777: ♂ Surinam: figured. Fig Seitz: G & S, genitalia: Williams 1933: Hayward 1948, ♂ as *phocus*, ♀ as *phintias*, genitalia.

Synonyms. *morpheus* Stoll 1782: ♂ Surinam: figured.

*decemmaculata* Sepp 1848: ♂ Surinam: figured.

*pherenice* Hewitson 1867: ♀ Brazil: type B.M.

*dianina* Plötz 1882: ♀ S. America: copy of MS fig in B.M.

B.M. 1 ♂ Guatemala. 7 ♂ 7 ♀ Honduras. 1 ♂ 1 ♀ Costa Rica. 1 ♂ 4 ♀ Panama. 2 ♂ Colombia. 2 ♂ 2 ♀ Trinidad. 5 ♂ 3 ♀ Fr Guiana. 3 ♂ 2 ♀ Br Guiana. 6 ♂ 4 ♀ Ecuador (Zamora. Quito. Cachabe). 6 ♂ 2 ♀ Peru (La Merced. Chanchamayo. Rio Colorado. Ucayali). 1 ♂ 1 ♀ Bolivia (Buenavista). 3 ♂ 2 ♀ Up Amazons (Iquitos. Tapajos. St Paulo d'Olivencia. Up Putumayo. Santarem). 7 ♂ 7 ♀ Pará. 16 ♂ 6 ♀ S. Brazil (Parana. Santa Catharina. São Paulo. Espirito Santo). 7 ♂ 3 ♀ Paraguay.

**3a** (1a). Upf spot in space 9 in line with the other apical spots. ♂ upf with the central spots crowded together: ♀ with a central white hyaline band from space 1b to cell, and an insignificant separated dot in space 3.

**3b** (5a). Palpi and cheeks white, below, as in the first 2 species. Large, ♂ F 30 mm.: ♀ 35 mm.

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3 (4). ♂ upf with a hyaline spot mid costa over the cell spot: ♀ unh outer half solid dark brown.

**solon**. 2 sub-species.

(a). ♂ unh outer half solid dark brown as in ♀. ♀ upf generally with 4 apical spots.

Sub-sp. **corilla** nov: ♂ Venezuela: type B.M. (of *cepio*).

Synonym. *cepio* Butler 1870: ♂ Venezuela: type B.M.: homonym of *caepio* Herrich-Schäffer.

B.M. 1 ♂ 1 ♀ Mexico. 1 ♂ 7 ♀ Honduras. 1 ♂ 2 ♀ Colombia. 1 ♂ 1 ♀ Venezuela.

(b). ♂ unh outer brown area divided into a discal and a submarginal band. ♀ usually with an additional apical spot in space 5.

Sub-sp. **solon** Plötz 1882: ♂ S. America.

B.M. 1 ♂ 1 ♀ Fr Guiana. 2 ♂ 5 ♀ Amazons (Pebas. Nauta. Iquitos. Pará). 1 ♂ Ecuador (La Chima). 1 ♂ 1 ♀ Peru (Chanchamayo. Tarapote).

4 (3). ♂ upf no hyaline spot mid costa. ♀ unh outer half dark brown with traces at the tornus of the discal band of the ♂ (except in Ecuador, whence specimens with 4 apical spots have been assigned to *broteas* and those with 5 to *solon*).

**broteas** Cramer 1780: ♀ Surinam: figured. The fig in Seitz is of *solon corilla*.

Synonyms. *eous* Möschler 1878: ♂ Venezuela.

*eugamon* Godman & Salvin 1893: ♂ Panama: type B.M.: figured.

B.M. 2 ♂ Panama. 1 ♂ Colombia. 1 ♂ 2 ♀ Venezuela. 1 ♂ 2 ♀ Trinidad. 3 ♂ 4 ♀ Fr Guiana. 2 ♂ 2 ♀ Ecuador (La Chima. Paramba). 1 ♂ Peru (Amazonas). 2 ♀ Up Amazons (Ega. St Paulo d'Olivencia). 10 ♂ 11 ♀ Pará. 3 ♀ Espirito Santo, S. Brazil. 1 ♂ Paraguay.

5a (3b). Palpi and cheeks, below, yellow or yellowish white. Comparatively small, ♂ F 23 mm.: ♀ 25 mm.

5 (6). ♂ upf with a conspicuous spot mid costa over the cell spot. Tegumen without side processes.

**paullinae** Sepp 1848: ♂ Surinam: figured.

Synonyms. *caepio* Herrich-Schäffer 1869: ♂ ? loc. Type fig by Mabilles & Vuillot. Fig G & S.

*cephisus* Hewitson 1876: ♀ Chiriqui.

*gizala* Möschler 1878: ♀ Colombia. Fig Seitz.

*nucula* Mabilles 1883: ♂ French Guiana.

*evathlus* Mabilles 1888: ♀ Chiriqui. Fig G & S.

*mermeros* Mabilles & Boullet 1912: ♂ Brazil.

B.M. 1 ♂ Guatemala. 1 ♂ 1 ♀ Honduras. 4 ♂ 1 ♀ Panama.

2 ♂ 1 ♀ Colombia. 3 ♂ Venezuela. 2 ♂ 2 ♀ Trinidad.

2 ♂ 2 ♀ Br Guiana. 1 ♂ Surinam. 3 ♂ Fr Guiana. 3 ♂

Ecuador. 2 ♂ 1 ♀ Peru (Yahua. Cavallo Cocha). 1 ♂

Bolivia (Buenavista). 3 ♂ 4 ♀ Amazons (Ega. St Paulo

d'Olivencia. Santarem). 2 ♂ 2 ♀ Pará. 1 ♂ Bahia. 1 ♂ 1 ♀

Maranhão. 2 ♂ 2 ♀ Brazil (Rio. Tijoco).

- 6 (5). ♂ upf no spot mid costa over the cell spot: spots nearly white and smaller: ground colour browner: uph no trace of dark bands and unh markings fainter. ♀ exactly like *paullinae*, but unh the submarginal dark band much more sharply defined. Tegumen with pointed side processes as in *broteas*.

**prax** nov: ♂ Pará: Sept 1940: bred by A. Miles Moss on *Trichilia furcata*: type B.M.

B.M. 8 ♂ 6 ♀ Pará.

**D.6. CEPHISE** Evans (p. 136 *ante*): type *cephise* Herrich-Schäffer: fixed by author.

The systematic position of this genus is doubtful. The elongate wings and the conspicuous tornal lobe H indicate affinity with *Chrysoplectrum* in the *Urbanus* group, while the broad costa points to *Achalarus*. But the genitalia are not of the *Urbanus* type: the very broad-ended uncus with a snow-white dorsal tuft is peculiar. The proximity of veins 7 and 8 F rather than of veins 6 and 7 point to the *Celaenorhinus* group near *Nascus* and there is a similar sexual difference, F spots yellow in ♂, white in ♀, though not differing in size or disposition. The position in repose is unknown. ♂ upf with an unusually long costal fold, reaching to beyond the discal spots. Clasp with a slender style.

## D.7. PORPHYROGENES

Single species. ♂ F 20–22 mm.

### **cephise.** 2 sub-species.

(a). Cuiller of clasp long, narrow, straight: a ♂ from Pará is intermediate to *hydarnes*. ♂ ♀ spot in space 1b against the outer edge of the spot in space 2.

Sub-sp. **cephise** Herrich-Schäffer 1869: ? loc (agrees with specimen from Panama): type B.M. Fig Seitz.

Synonyms. *zopyrus* Plötz 1881: ♀ Surinam. Fig Seitz.

*injuncta* Plötz MS 1882 = *cephise*.

*glarus* Mabilles 1888: ♂ Amazons: figured.

*orita* Schaus 1902: ♀ Peru.

B.M. 1 ♀ Honduras. 2 ♂ Panama. 1 ♂ Fr Guiana. 1 ♀ Surinam. 1 ♂ Upper Amazons (St Paulo d'Olivencia). 6 ♂ 3 ♀ Pará. 1 ♂ Ecuador. 1 ♂ Peru.

(b). Cuiller of clasp broad and irregular. ♀ upf spot in space 1b with its upper edge exactly against the lower edge of the spot in space 2.

Sub-sp. **hydarnes** Mabilles 1876: ♀ Brazil: type B.M. Fig Hayward 1948, ♂ and genitalia.

Synonyms. *maneros* Mabilles 1888: ♀ Brazil. Placed by Mabilles & Vuillot 1891 as a synonym of *Nascus caepio* Herrich-Schäffer, but the original description is considered to apply to *hydarnes* ♀.

*orima* Schaus 1902: ♂ Petropolis.

B.M. 1 ♂ Matto Grosso. 5 ♀ S. Brazil (Rio. São Paulo. Blumenau). 2 ♂ Paraguay.

**D.7. PORPHYROGENES** Watson 1893: type *passalus* Herrich-Schäffer: fixed by author as *omphale* Butler, which is a sub-species of *passalus*.

Synonym. *Physalea* Mabilles 1903: type *vulpecula* Plötz: sole species included.

Though the type males of these two genera may seem generically different, if both sexes of the species listed below are examined, it will be seen that there is no basis for generic separation.

The genus is characterised by the short antennae,  $< \frac{1}{2}$  costa; the long apiculus; the absence of apical spots upf; sexual dimorphism: the multiplicity of secondary sexual



characters: similarity of the genitalia. All the species except the last have a costal fold.

1a (9a). Large, ♂ F > 20 mm.

1b (6a). H termen convex, origin of vein 6 nearer to the origin of vein 7 than to the origin of vein 4.

1c (4a). H origins of veins 2 and 7 opposite: cell >  $\frac{1}{2}$  wing.

1 (2. 3). ♂ above, black with a purple flush, unmarked, cilia conspicuously white: below deep purple brown, unmarked. Above, head, and below, palpi, pectus and legs orange. Antennae above chequered orange and black: below black. ♂ uph an ochreous brown costal hair tuft from the base of space 7: a dense brown dorsal tuft in space 1b. ♂ unf vein 1 acutely bisinuate and dorsum convex: vein 1 before its middle bared of scales, slightly swollen and surrounded by a grey speculum: unh the wing folded over under the dorsal hair tuft uph and streaked with orange scales on the edge of the fold. ♂ F 24 mm.

**stupa** nov: ♂ no loc.: type B.M.

B.M. Only the type.

2 (1. 3). ♂ above and below dark brown with the base F and the tornal half H shining blue: a hyaline orange band upf from mid costa to near termen in space 1b. ♀ above dark brown, bases shining dark greenish blue: unf dark brown: unh greenish brown, sparsely overlaid with grey scales: upf with a macular white band placed as in the ♂. Secondary sexual characters as in *stupa*, but the dorsal tuft uph is less conspicuous and unh the wing is not modified.

**passalus**. 2 sub-species.

(a). Smaller, ♂ F 21 mm.: orange band upf wider, 2 mm., even and compact.

Sub-sp. **omphale** Butler 1871: ♂ Venezuela: type B.M. Fig Butler 1874.

B.M. 2 ♂ Venezuela. 1 ♀ Colombia.

(b). Larger, ♂ F 24 mm.: band narrow,  $1\frac{1}{2}$  mm., more irregular and tapering towards termen.

Sub-sp. **passalus** Herrich-Schäffer 1869: ♀ ? loc. MS fig of type in B.M. ♂ fig in Seitz as *omphale*.

#### D.7. PORPHYROGENES

B.M. 1 ♂ British Guiana. 2 ♂ 2 ♀ Bolivia (La Paz. Buenavista). 7 ♂ Up Amazons (Ega. St Paulo d'Olivencia. Pebas. Manaos). 3 ♂ Pará.

- 3 (1. 2). ♂ above, tawny brown, unmarked except for some faint discal spots uph: below, copper brown, unmarked: palpi, pectus and legs orange. ♀ brown with bluish bases: upf with conspicuous rounded hyaline white spots in spaces 2 and 3. ♂ upf with a double costal brown hair tuft: the lower erectile tuft arising from base of radius: the upper recumbent tuft from near the base of space 7: costa dark brown, broadly. Uph an erect dorsal fringe in space 1b of the ground colour. Unf vein 1 is bisinuate, but the dorsum is nearly straight: central quarter of vein 1 is bare and swollen, and is surrounded by a cloudy speculum. ♂ F 24 mm.: ♀ 27 mm. The name is based on the ♀ which has not been examined: whether the ♂ has been correctly assigned is uncertain.

**sororcula** Mabilie & Boullet 1912: ♀ French Guiana: figured.

B.M. 1 ♂ Fr Guiana.

- 4a (1c). H vein 2 arising well before vein 7. Cell =  $\frac{1}{2}$  wing. 4 (5). ♂ ♀ upf with 2 widely separated hyaline spots in spaces 2 and 3, quadrate in ♂, the spot in space 2 elongate in ♀. Above basal areas tawny in ♂, bluish in ♀, with dark discal spots uph. The B.M. have a ♀ which is plain dark brown, unmarked except for the large hyaline spots upf. ♂ ♀ F 26 mm. ♂ not examined.

**probus** Möschler 1876: ♂ Surinam: figured. ♂ ♀ Fig Seitz. B.M. 1 ♀ Costa Rica. Fig by Hayward 1940 = *Thracides scipio* Fabricius ♀.

- 5 (4). ♂ similar to *sororcula*. ♀ similar to *passalus*, but the blue areas duller. ♂ secondary sexual characters as in *sororcula*, but unf the bared portion of vein 1 is longer and seems to be doubled, like 2 parallel veins, and the speculum is larger. Below palpi, pectus and legs orange.

**vulpecula**. 2 sub-species.

- (a). Smaller, ♂ F 22 mm., ♀ 25 mm.: ♂ brighter.

Sub-sp. **vulpecula** Plötz 1882: ♂ S. America. Fig Seitz.

Synonym. *eudemus* Mabilie 1888: ♀ Chiriqui: figured.

B.M. 1 ♀ Colombia. 1 ♂ Venezuela. 1 ♂ Fr Guiana.

1 ♂ 1 ♀ Pará. 1 ♂ Up Amazons (Iquitos). 3 ♂ Paraguay.

(b). Larger, ♂ F 26 mm., ♀ 30 mm.: ♂ darker.

Sub-sp. **immaculata** Skinner 1920: ♂ Chanchamayo, Peru.

B.M. 3 ♂ Peru (Chanchamayo. Rio Colorado. Hilla-pani). 1 ♀ Bolivia (Santa Cruz).

**6a** (1b). H termen straight, origin of vein 6 mid origins of veins 7 and 4.

6 (7a). ♂ H origin of vein 7 nearer end cell than base: vein 2 arising just before vein 7. ♂ above like *vulpecula*, but browner: uph with comparatively conspicuous dark spots, sometimes traceable upf. Below chocolate: palpi and pectus brown, tibiae orange: unf apex with a pale brown tip: unh with a continuous dark discal band. Cilia outwardly grey. Secondary sexual characters as in *sororcula*. ♂ F 26 mm.

**suva** nov: ♂ La Merced, Peru: type B.M. Genitalia fig by Lindsey 1925 as *vulpecula*.

B.M. 3 ♂ La Merced, Peru.

**7a** (6). H vein 7 mid base and end of cell, arising well before vein 2. ♂ F 26 mm.

7 (8). ♂ secondary sexual characters as in *sororcula*. Above tawny brown, no black spots. ♀ brown, hyaline band as in *vulpecula*, but no blue colouring: below palpi and pectus brown.

**zohra**. 2 sub-species.

(a). Bright uniform tawny brown, above: below chocolate; apex unf may be tipped pale brown. ♀ unh purple brown.

Sub-sp. **zohra** Möschler 1878: ♂ Venezuela. Fig Seitz.

Synonyms. *virgatus* Mabilie 1888: ♀ Pebas: figured.

*sula* Williams & Bell 1940: ♂ Honduras: genitalia figured.

B.M. 1 ♀ Honduras. 1 ♀ Br Guiana. 2 ♂ Fr Guiana.

2 ♂ Pará.

(b). ♂ above, outwardly broadly darker: unh purple brown. ♀ below, pale purple brown, apex F broadly darker: unh post-discal area broadly paler.

D.7. PORPHYROGENES

Sub-sp. **stresa** nov: ♂ Tarapôte, Peru: type B.M.

B.M. 2 ♂ 1 ♀ Peru (Tarapote). 3 ♂ Bolivia. (Rio. Songo. Buenavista).

**8** (7). ♂ secondary sexual characters uph as in *zohra*, but the costal brushes are thinner, and, between the upper brown tuft and the lower yellow tuft, there is a white glandular area. Unf vein 1 is not bisinuate nor modified, but above the middle of the vein there is a recumbent brown hair tuft. Above, much yellower than *zohra*: apex F broadly darker and with a purple wash. Below, dull yellow, outwardly browner with a faint purple wash. Unh faint traces of a dark discal band.

**boliva** nov: ♂ Venezuela: type B.M.

2 ♂ Venezuela.

**9a** (1a). Smaller, ♂ F not > 20 mm.

9 (10a). H termen straight, as in *zohra*; wings produced. Above, brown, paler at apex F: cilia grey. Below, similar, upf apex paler: palpi and pectus brown. ♂ characters as for *zohra*. ♂ F 20 mm. H vein 2 well before vein 7.

**spoda** nov: ♂ Chiriqui: type B.M.

B.M. Only the type.

**10a** (9). H termen convex as in *passalus*.

10b (12a). H vein 7 before vein 2. Below, ochreous brown; palpi, pectus and legs ochreous.

10 (11). ♂ ♀ upf base and most of uph bright ferrugineous ochreous. ♂ uph with dorsal tuft conspicuous: the usual double costal tuft, the upper tuft overlying a speculum, and the lower tuft from base of cell overlying a small circular glandular area. Unf with a conspicuous speculum, round the bared portion of vein 1, which is highly bisinuate and the dorsum is bowed. ♂ F 18 mm.: ♀ 20 mm.

**despecta**. 2 sub-species.

(a). ♂ upf with a small hyaline spot in space 2 (may be absent), a larger one in space 3 and 2 apical spots: the only spotted ♂ in the genus. ♀ with larger equal spots in spaces 2 and 3 (widely separated) and 3 apical spots.

Sub-sp. **cervinus** Plötz: ♂ ? loc: copy of MS plate in B.M.

B.M. 1 ♂ Br Guiana. 1 ♂ 1 ♀ Fr Guiana.



(b). ♂ unmarked. ♀ upf with small spots in spaces 2 and 3.

Sub-sp. **despecta** Butler 1870: ♀ Pará: type B.M. Fig Butler 1870: Seitz.

Synonym. *ferruginea* Plötz 1883: ♂ Bahia. Fig Seitz in genus *Lignyostola*.

B.M. 1 ♂ Br Guiana. 6 ♂ 3 ♀ Pará.

**11** (10). ♂ above, dark ferruginous, apex F broadly browner: below, ochreous brown with dark discal spots H (often absent). ♀ brown with bases, above, dull ochreous and large hyaline spots in spaces 2 and 3. ♂ uph dorsal tuft less conspicuous: a single yellow costal tuft overlying a dull speculum: unf vein 1 bisinuate and dorsum convex, bared portion of the vein lying below a groove and surrounded by a dull speculum. ♂ F 20 mm.

**pausias** Hewitson 1867: ♂ Amazons: type B.M. Fig Hewitson 1873: Seitz.

B.M. 1 ♂ Br Guiana. 3 ♂ Pará. 3 ♂ Up Amazons (Rio Madeira. Iquitos. Villa Nova).

**12a** (10b). H vein 2 before vein 7. Below, palpi and pectus brown.

**12b** (14). ♂ with secondary sexual characters. ♀ upf with conspicuous hyaline spots in spaces 2 and 3, as in *pausias*. Unh dark brown at tornus.

**12** (13). ♂ above, dark ochreous brown: may be indications of dark discal spots on H: below, similar. ♀ browner, spots upf quadrate, not oblique. ♂ secondary sexual characters as for *sororcula*. ♂ F 18 mm.: ♀ 20 mm.

**spanda** nov: ♂ Pará: type B.M.

1 ♂ Br Guiana. 4 ♂ 4 ♀ Pará and Santarem.

**13** (12). ♂ ♀ above and below, plain brown. ♀ upf spots in spaces 2 and 3 oblique. ♂ uph dorsal tuft inconspicuous: a single erectile costal tuft from above cell, costa paler brown, but there is no speculum: unf vein 1 not bisinuate, nearly straight, centrally bare and over the bare portion there is an oval dull yellowish brand. ♂ ♀ F 20 mm.

D.8. OCYBA

**sparta** nov: ♂ Pará: A. Miles Moss: type B.M.

B.M. 2 ♂ 3 ♀ Pará.

14 (12b). ♂ without secondary sexual characters and ♀ without spots upf. ♂ ♀ brown with a purple wash, paler below: ♀ uph bright ochreous, costa dark brown and below yellowish brown. ♂ ♀ venation peculiar: vein 1 F is very bowed, not bisinuate and veins 2 and 3 are also bowed. ♂ ♀ F 20 mm. An aberrant species.

**glavia** nov: ♂ Panama: type B.M.

B.M. 1 ♂ Panama. 1 ♀ no loc: both in poor condition.

**D.8. OCYBA** Lindsey 1925: type *calathana* Hewitson: fixed by author: to replace *Caecina*.

Synonym. *Caecina* Hewitson 1868: type *calathana* Hewitson, sole species included. Homonym by Stal 1863.

Distinguished from the closely allied *Porphyrogenes* by the conspicuously truncate F, the shorter F cell and the rather different secondary sexual characters. ♂ upf with a costal fold: uph with an upturned tuft of reddish hairs from basal half of mid cell, directed towards the costa: also uph a dorsal tuft as in *Porphyrogenes*: unf vein 1 bisinuate, the second quarter bared and surrounded by a speculum extending from vein 2 to the dorsum, which is much bowed at this point: H at base more convex than usual.

A single species.

**calathana.** 3 sub-species.

(a). H cilia yellow. Unh dorsal half of termen broadly yellow, often more or less shaded brown. ♂ F 25 mm.

Sub-sp. **calanus** Godman & Salvin 1894: ♂ Guatemala: figured: type B.M. Fig Seitz.

B.M. 4 ♂ Mexico. 9 ♂ 2 ♀ Guatemala. 1 ♂ Honduras. 7 ♂ Costa Rica.

(b). Uph tornus more or less broadly yellow. ♂ F 23 mm.

Sub-sp. **calathana** Hewitson 1868: ♂ Colombia: type B.M. Fig Hewitson: Staudinger: Seitz.

Synonym. *columbica* Mabilie & Boullet 1919: ♂ Colombia.

B.M. 2 ♂ Colombia. 1 ♀ Panama.

(c). Cilia ashy. Uph and unh no yellow: plain brown.

♂ F 23 mm.

Sub-sp. **compusa** Hewitson 1868: ♂ Amazons: type B.M.

Fig Hewitson: Seitz, incorrectly.

B.M. 1 ♂ Trinidad. 1 ♂ Amazons.

**D.9. ABLEPSIS** Watson 1893: type *vulpinus* Hübner: fixed by author.

The genus is characterised by the long slender apiculus, the long cell F and the peculiar secondary sexual characters, recalling *Nascus*. ♂ unh with a V-shaped channel formed by the distortion of veins 1a and 1b, extending half-way to the termen from the base. There are modified scales at the bottom of the channel, covered by a tuft of long yellow erectile hairs springing from the dorsal side of vein 1b: along vein 1a there is a dense ridge of short whitish hairs directed towards the apex of the wing. The channel is present in *azines*, but the brand and tufts seem absent.

1a (4). Upf no spot in space 1b or mid costa.

1 (2a). Unh with small, separated, dark spots. Above ochreous brown to dark brown at the apex F and costa H. ♂ upf with large yellow hyaline spots in spaces 2, 3 and cell, also 3 irregular apical spots. ♀ upf browner, with the spots white, those in space 2 and cell much smaller and wide apart: unh yellow with a dark brown border, broadest at apex, dark spots as in ♂ but much reduced. ♂ F 18 mm.: with costal fold: wings produced. Resembles *Telemiades avitus*.

**azines** Hewitson 1867: ♂ Amazons: type B.M. Fig Hewitson: Seitz.

Synonyms. *hypoxanthos* Mabilie 1877: ♀ Fr Guiana: type B.M.

*perseus* Mabilie & Boulet 1912: ♂ Surinam: figured. Fig Seitz.

*aberrans* Mabilie & Boulet 1912: ♀ Fr Guiana.

B.M. 1 ♂ 1 ♀ Colombia. 3 ♂ 4 ♀ Br Guiana. 4 ♂ 5 ♀ Fr Guiana. 13 ♂ 15 ♀ Amazons (Up Putumayo. Iquitos. Ega. Villa Nova. Pará). 1 ♀ Peru (Chanchamayo), larger.

D.9. ABLEPSIS

**2a** (1). Unh with dark bands. Ochreous brown.

2 (3). ♂ upf with large equal yellow hyaline spots in spaces 2 and 3, completely overlapping, an adjoining spot in space 3, and 3 apical spots in a straight line. ♂ F 21 mm.: with costal fold: wings produced.

**fenestratus** Gmelin 1788: ? loc. Kirby 1869 reported that the type was in Dublin University but too broken for identification: it is now no longer in existence. The description seems only to fit this species.

Synonym. *acutipennis* Mabilie & Boulet 1912: ♂ Fr Guiana.

B.M. 1 ♂ Fr Guiana.

**3** (2). ♂ upf spots in spaces 2 and cell not completely overlapping. ♂ F 18 mm.: no costal fold: wings rounded. ♀ unf with a large pale spot in space 1b between the spot in space 2 and the termen.

**vulpinus**. 2 sub-species.

(a). ♂ upf central yellow spots in spaces 2, 3 and cell small and wide apart, 3 apical spots. ♀ similar, spots white.

Sub-sp. **guyanensis** Mabilie & Boulet 1912: ♂ Fr Guiana. B.M. 2 ♂ 1 ♀ Fr Guiana. 1 ♂ 1 ♀ Amazons (Teffe).

(b). ♂ ♀ central yellow spots in spaces 2, 3 and cell large, spot in space overlaps the other two to their centres, usually only a single apical spot in space 6, sometimes also a dot in space 8.

Sub-sp. **vulpinus** Hübner 1820: no loc: figured. Fig Seitz. B.M. 1 ♂ "Pará". 14 ♂ 13 ♀ Brazil (Espírito Santo. Minas Geraes. Rio. Santa Catharina. Corcovado).

**4** (1a). Upf with white spots in spaces 1b and costa forming a macular band with large spots in spaces 2 and cell: an adjoining spot in space 3, and 3 apical spots. Above dark brown, with 2 dark bands uph. Unf dorsum white. No costal fold. Resembles *Celaenorrhinus*.

**amazonensis**. 2 sub-species.

(a). Unh the dark bands from above conspicuously outlined with olive-yellow scaling, giving the appearance of a yellow banded dark wing. ♂ F 20 mm.



Sub-sp. **amazonensis** Bell 1947: ♂ Amazonas, Colombia: genitalia figured.

B.M. 5 ♂ 8 ♀ Amazons (St Paulo d'Olivenca. Ega. Nauta. Santarem). 1 ♂ 1 ♀ Peru (Chanchamayo).

(b). Unh the yellow scaling absent. Uph the dark bands invisible. Larger, ♂ F 24 mm.

Sub-sp. **renta** nov: ♂ San Gaban, Peru, 2,500 ft.: March-April 1917.

B.M. Only the type.

**D.10. ORNEATES** Godman & Salvin 1894: type *aegiochus* Hewitson: fixed by author.

This genus seems to be a connecting link between *Porphyrogenes* and *Celaenorrhinus*. The antennae are conspicuously white on the inner side before the apiculus, but the shaft is not chequered: the apiculus is rather more arcuate than in *Celaenorrhinus*.

1 (2). Upf basal  $\frac{1}{3}$  (♀  $\frac{1}{4}$ ) conspicuously shining metallic blue: no discal spot in space 3: 5 apical spots in spaces 4 to 8. Below, bases more or less metallic blue: unh dark brown, marked only with a small, faint, yellowish discal spot. ♂ F 26 mm.

**aegiochus** Hewitson 1876: ♀ Chiriqui. Fig Godman & Salvin, ♂ and genitalia.

Synonym. *mysius* Plötz 1886: ? loc.

B.M. 2 ♂ 1 ♀ Costa Rica. 3 ♂ 4 ♀ Panama.

2 (1). ♀ upf faint traces of blue colouring spreading to the base from the head and thorax: a small spot in space 3, just detached from the hyaline white band running from vein 1 to the costa, divided into spots by dark veins: 3 apical spots in spaces 6 to 8: some narrow white scaling outside the spot in space 1b. Cilia brown, whitish at tornus F and apex H. Unf basal  $\frac{1}{4}$  olive scaled with a slight metallic blue reflexion: narrow whitish scaling outside the spot in space 1b. Unh very like *Celaenorrhinus*: from base to mid costa, lower end cell and dorsum up to vein 2, olive scaled: a small double whitish spot at

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end cell on either side of vein 5 and a post-discal row of small whitish spots from space 1c to space 5. Palpi, pectus and thorax, below, whitish. ♀ F 25 mm. H produced at tornus.

**savia** nov: ♀ Rio Cachiyaca, Iquitos: Stuart 1893: type B.M. B.M. Only the type.

**D.II. CELAENORRHINUS** Hübner 1819: type *eligius* Stoll: fixed by Scudder 1875.

Synonym. *Ancistrocampta* Felder 1862: type *syllius* Felder: sole species included.

*Hantana* Moore 1881: type *spilothyrus* Felder: fixed by author as *infernus* Felder, which is a synonym of *spilothyrus*. *Gehlota* Doherty 1889: type *sumitra* Moore: fixed by Watson 1893.

*Narga* Mabilie 1891: type *monartus* Plötz: type fixed by Watson 1893 as *chiriquensis* Mabilie, which is a synonym of *monartus*.

*Apallaga* Strand 1911: type *mokeezi* Wallengren: sole species included was *separata* Strand, which is a synonym of *mokeezi*.

The genus is readily distinguished by the erect palpi, long forewing cell, quadrate hindwing and the secondary sexual characters, consisting of hair pencils on the hind tibiae in conjunction with a packet (not a double pouch as in *Pyrgus*) of large androconial scales on the underside of the thorax. Typically there are large irregular hyaline spots F and small yellow spots unh.

1a (11a). F central band broken into spots.

1b (3a). F central spots as small as the apical spots.

1 (2). F no hyaline spots in space 1b. ♂ F 18 mm.

**monartus** Plötz 1884: Panama. Fig Seitz.

Synonym. *chiriquensis* Mabilie 1891: ♂ Chiriqui: type B.M.: figured. Fig Godman & Salvin, ♂ and genitalia.

B.M. 1 ♂ 1 ♀ Mexico. 2 ♂ 1 ♀ Nicaragua. 3 ♂ 2 ♀ Costa Rica. 11 ♂ 2 ♀ Panama. 1 ♂ Colombia.

2 (1). F 2 discal and 1 sub-basal hyaline spots in space 1b. ♂ F 22 mm.

**astrigera** Butler 1874: ♂ Urucurituba, Rio Tapajos: type B.M.

Synonyms. *stellaris* Plötz 1884: Pará: copy of Plötz's MS figure No. 1097 in B.M.

*canutana* Riley 1919: ♂ Allianca, Canutana, Rio Purus: type B.M.

B.M. 1 ♂ Br Guiana. 5 ♂ Amazons (Rio Tapajos. Rio Purus. Rio Madeira).

3a (1b). F central spots much larger than the apical spots.

3b (5a). Uph with large central and discal dark spots.

3 (4). F with a small double hyaline spot divided by vein 2 shortly after its origin. Cuiller of clasp tapered to a sharp point: style as long as cuiller.

**fritzgaertneri**. 2 sub-species.

(a). Above grey, due to dense clothing of olive hairs.

♂ F 23 mm.

Sub-sp. **fritzgaertneri** Bailey 1880: Salvador. Fig Seitz.

B.M. 2 ♂ 11 ♀ Mexico. 1 ♀ Guatemala. 1 ♂ Honduras. 2 ♀ Nicaragua.

(b). Above dark brown. ♂ F 21 mm. Cilia H conspicuously white chequered. Probably a seasonal form: genitalia and markings as in *fritzgaertneri*.

Sub-sp. **variegatus** Godman & Salvin 1894: ♂ Mexico: type B.M.: figured with genitalia.

B.M. 3 ♂ 2 ♀ Mexico. 2 ♂ Guatemala. 1 ♂ 1 ♀ Costa Rica.

4 (3). F with a dark sub-basal spot in space 1b. Marked as in *fritzgaertneri*, except that the spots F are pale yellow in ♂: spots in space 3 and mid costa larger: unf tornus conspicuously pale yellow. End of cuiller longer, style short. ♂ F 22 mm.

**stallingsi** Freeman 1946: ♂ Monterrey, N.L. Mexico: genitalia figured.

B.M. 1 ♂ 1 ♀ Costa Rica.

5a (3b). Uph plain or with small yellow spots.

5b (7a). F spot in space 3 with its upper edge placed beyond (nearer termen than) origin of vein 4.

5 (6). F not longer than 22 mm. Cuiller tapered to a sharp point. F apical spots small, irregular.

**shema.** 5 sub-species.

(a). F spots in space 2 and cell wide apart. Unh uniform brown. ♂ F 18 mm.

Sub-sp. **shema** Hewitson 1877: ♂ Fr Guiana: type B.M. Fig Seitz: Williams & Bell 1934.

Synonym. *ochrogutta* Möschler 1882: ♂ Surinam: figured. B.M. 1 ♂ Br Guiana. 8 ♂ 6 ♀ Fr Guiana. 2 ♂ Surinam. 1 ♂ Ecuador (Rio Napo).

(b). Similar, but unh entirely yellow except for a narrow brown costa, and sometimes some brown shading at the tornus and along the veins. ♂ F 19 mm.

Sub-sp. **ochra** nov: ♂ St Paulo d'Olivencia, Amazons: M. de Mathan: type B.M.

B.M. 1 ♂ 3 ♀ Up Amazons (St Paulo. Rio Putumayo. Rio Madeira).

(c). Similar, but basal quarter unf and basal third unh conspicuously shaded ochreous. ♂ F 21 mm.

Sub-sp. **vox** nov: ♂ Iquitos, Up Amazons: May 1932: G. Klug: type B.M.

B.M. 5 ♂ 1 ♀ type loc.

(d). As *vox*, but unf and unh plain brown. ♂ F 21 mm.

Sub-sp. **disjunctus** Bell 1940: ♂ Rio Morona, Peru: genitalia figured.

B.M. 3 ♂ 1 ♀ Peru, Tarapote.

(e). F spot in space 2 overlapped by cell spot as in *eligius*. Unh plain brown. ♂ F 22 mm.

Sub-sp. **songoensis** Draudt 1922: Rio Songo, Bolivia: figured.

B.M. 3 ♂ Peru (La Merced. Rio Colorado). 2 ♂ Bolivia (Cochabamba).

- 6 (5). ♂ F 27 mm. Markings F as in *eligius* except for the position of the spot in space 3 much nearer to termen and the spot in space 2 is farther removed from the cell spot, due to the outer part of the lower edge of the cell spot being bent up away from the cubitus and to the spot in space 2 not extending behind the origin of vein 3. Below, basal areas shaded ochreous as in *shema vox*. Clasp angled at back; cuiller broad-ended, with a point projecting inwards.



**vagra** nov: ♂ Nauta, Amazons: coll Hewitson: type B.M.  
B.M. 1 ♂ type. 1 ♀ Chambireyacu, near Yarinagues,  
Huallaga, Peru: M. de Mathan: June–August 1885.

7a (5b). F spot in space 3 with its upper edge not beyond the origin of vein 4.

7b (10). F spot in space 3 exactly under the origin of vein 4. The following 3 species are superficially inseparable: there are 3 types of genitalia, which are taken as the basis for specific identity, but in each case there is a great deal of sub-specific and individual variation, both in respect of the facies and the genitalia.

7c (9). Gnathos, seen ventrally, slender and tapered to a point.

7 (8). Cuiller of clasp bifid: style much shorter than the cuiller. Generally, F spot mid costa enters space 11: apical spots in a decreasing straight line to costa: spots in spaces 4 and 5 absent: unh the small spots base cell, above it in space 7, end cell and double spot in space 1c, sharply marked.

**similis.** 4 sub-species.

(a). Inner branch of divided cuiller short, turned in towards outer branch, which is very long and curved inwards. ♂ F 24 mm.

Sub-sp. **stola** nov: ♂ Panama, Guatemala: Champion: type B.M.

B.M. 2 ♂ 2 ♀ Mexico. 3 ♂ 3 ♀ Guatemala. 2 ♂ 1 ♀ Honduras. 1 ♂ Nicaragua.

(b). Cuiller similar, but the inner branch is longer and extends to the outer side of the outer branch. ♂ F 22 mm.

Sub-sp. **approximatus** Williams & Bell 1940: ♂ Costa Rica: genitalia figured.

B.M. 2 ♂ 1 ♀ Costa Rica. 3 ♂ 2 ♀ Panama.

(c). Cuiller divided at the tip, the inner branch projecting beyond the outer branch and curved backwards. ♂ F 21 mm.

Sub-sp. **bifurcus** Bell 1934: ♂ Trinidad: genitalia figured.

B.M. 1 ♂ Costa Rica. 4 ♂ 1 ♀ Colombia. 8 ♂ 3 ♀ Trinidad. 1 ♂ 1 ♀ Br Guiana. 1 ♀ Surinam. 1 ♂ Ecuador (Chimbo).

(d). Cuiller similar to *bifurcus*, but the inner branch is

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straight, projecting beyond the outer branch, which is shortly curved inwards to a point. ♂ F 21 mm.

Sub-sp. **similis** Hayward 1933: ♂ Argentine: figured ♂ and genitalia. Fig Williams & Bell 1934, genitalia: Hayward 1948, ♂ and genitalia.

B.M. 1 ♂ 3 ♀ Bolivia (Cochabamba. Santa Cruz de la Sierra). 1 ♂ Goyaz. 1 ♂ 2 ♀ Matto Grosso. 8 ♂ 5 ♀ S. Brazil (Parana. São Paulo. Novo Friborgo. Rio Grande). 4 ♂ 4 ♀ Paraguay. 1 ♂ Argentine (Salta, Rio Zenta).

8 (7). Cuiller of clasp undivided: end turned inwards to a short, pointed tip.

**eligius**. 2 sub-species.

(a). Style of clasp very short, much shorter than the cuiller. F apical spots tend to be small and irregular, the lower spot, in space 6, usually shifted out. Varies in size, ♂ F 21-25 mm.

Sub-sp. **eligius** Stoll 1782: no loc: figured. Fig Staudinger 1889: genitalia by Godman & Salvin: Seitz: Hayward 1933, ♂ and genitalia = *punctiger*.

Synonyms. *vulturinus* Felder 1862: ♂ no loc: type B.M. *hiera* Plötz 1884: no loc: copy of MS figure in B.M.

B.M. 2 ♂ 1 ♀ Costa Rica. 3 ♂ 2 ♀ Panama. 6 ♂ 5 ♀ Colombia. 5 ♂ 2 ♀ Venezuela. 2 ♂ 1 ♀ Trinidad. 2 ♀ Tobago. 1 ♂ 1 ♀ Surinam. 2 ♂ Amazons. 1 ♀ Pará. 3 ♂ 2 ♀ Peru (Marcapata).

(b). Style of clasp as long or nearly as long as the cuiller. F apical spots large, of equal size and in a straight line. Large, ♂ F 27-30 mm.

Sub-sp. **punctiger** Burmeister 1878: ♂ Argentine: figured. Fig Williams & Bell 1934, genitalia: Hayward 1948, ♂ and genitalia.

Synonym. *insidiosus* Mabilie & Boulet 1916: ♂ Brazil.

B.M. 5 ♂ 2 ♀ Bahia. 2 ♀ Matto Grosso. 15 ♂ 15 ♀ S. Brazil (Parana. São Paulo. Novo Friborgo. Rio. Rio Grande). 2 ♂ Argentine (Entre Rios).

9 (7c). Gnathos broad, end rounded. Cuiller evenly tapered and curved inwards to a sharp point: style short. F spot in space 3 generally closer to the cell spot and the central spots are more band-like.

**saroma.** 3 sub-species.

- (a). F 4 apical spots, in spaces 6 to 9: spots in spaces 4 and 5: no lower discal nor sub-basal spots in space 1b. Unf conspicuous tornal quadrate yellow spot in space 1b. Below, basal quarter F and third H shaded ochreous. ♂ F 25 mm.

Sub-sp. **saroma** nov: ♂ Colombia: type B.M.

B.M. 1 ♂ 1 ♀ Colombia.

- (b). F 3 apical spots as usual; a dot in space 4: 2 discal and a sub-basal spot in space 1b. Unh plain. H more produced at vein 4 than usual. ♂ F 26 mm.

Sub-sp. **tonio** nov: ♂ Colombia: type B.M.

B.M. 1 ♂ 2 ♀ Colombia.

- (c). F as *saroma*, but no apical spot in space 9: lower discal spot in space 1b present. Unf the pale tornal area less conspicuous. Unh more uniform; shading of basal area, grey. ♂ F 22 mm.

Sub-sp. **timor** nov: ♂ Peru, Moyabamba: type B.M.

B.M. 2 ♂ Venezuela. 2 ♂ 1 ♀ Peru (Charape. Pozuzu. Moyabamba). 1 ♂ Brazil. 2 ♀ Minas Geraes.

**10** (7b). F spot in space 3 with its upper edge before the origin of vein 4 and forms part of a compact central band: spots in cell and space 2 rhomboidal: no sub-basal spot in space 1b and the upper discal spot directed to the tornus instead of the dorsum as usual, lower spot absent or minute: spots in spaces 4 and 5 conspicuous and more in line with the apical spots. Clasp like *eligius*.

**cynapes.** 2 sub-species.

- (a). ♂ F 23 mm. F no apical spot in space 9. Unh basally broadly ochreous.

Sub-sp. **darius** nov: ♂ Ecuador, Chimbo: type B.M.

B.M. 1 ♂ Colombia. 2 ♂ 1 ♀ Ecuador (Chimbo. Balzapamba).

- (b). ♀ F 27 mm. F with decreasing apical spots in spaces 6 to 9, on an even curve with the spots in spaces 4 and 5: no lower discal spot in space 1b and the upper spot is large with its upper edge contiguous with the lower edge of the spot in space 2. Unh plain brown.

D.11. CELAENORRHINUS

Sub-sp. **cynapes** Hewitson 1870: ♀ Ecuador: type B.M.  
Fig Williams & Bell 1934, genitalia.  
B.M. Only the type.

**11a** (1a). F central band unbroken.

**11b** (13a). F central band white.

**11** (12). F central band with edges irregular. ♂ F 30 mm.

**tritonae** Weeks 1901: Bolivia. Fig Weeks 1906.

B.M. 2 ♂ Bolivia (Farinas. La Paz).

**12** (11). F edges of central band regular. F 25 mm.

**anchialus** Mabilie 1878: S. America: type Paris Museum  
(lost)

Synonym. *pertica* Plötz 1882: S. America. Fig Seitz:  
Lindsey 1925, a ♀ from Perene, Peru.

B.M. None.

**13a** (11b). F central band orange yellow.

**13** (14). F also with an apical band from space 4 to  
space 8. ♂ F 21 mm.

**suthina** Hewitson 1877: ♀ Ecuador: type B.M.

Synonym. *amyrus* Mabilie 1889: Rio San Juan, W.  
Colombia: figured.

B.M. 5 ♂ 5 ♀ Ecuador (Cachabe. Zamora).

**14** (13). F apex unmarked. ♂ F 22 mm.

**syllius** Felder 1862: ♀ Brazil: type B.M. Fig Seitz as  
*celsus*.

Synonym. *clearchus* Plötz 1882: S. America. Fig  
Lindsey 1925, ♂ and genitalia.

B.M. 6 ♂ 3 ♀ Br Guiana. 1 ♂ 1 ♀ Surinam. 9 ♂ 5 ♀ Fr  
Guiana. 2 ♂ 3 ♀ Ecuador (Rio Napo. Sarayacu). 3 ♂ 1 ♀  
Peru (Pozuzo. Ucayali. Chambireyacu). 11 ♂ 10 ♀ Up  
Amazons (Iquitos. Putumayo. Tapajos. Pebas. Ega).  
5 ♂ 5 ♀ Pará. 1 ♂ 1 ♀ Maranh. 3 ♂ 5 ♀ Brazil.



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PRESENTED

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B.1. PHOCIDES.



1. *polybius*.      *phanias*.      2. *charon*.      3. *distans*.



4. *perillus*.      5. *metroderus*.      *nigrescens*.      6. *xenocrates*.



7. *novalis*.      8. *thermus*.      9. *partia*.      10. *padrona*.



11. *pigmalion*.      *batabano*.      12. *johnsoni*.      13. *urania*, *vida*.



14. *phia*.      15. *phia*.      16. *oreides*.      17. *yokhara*.      18. *lincea*.

B.2. HYPOCRYP-  
-TOTHRIX.

B.3. TARSOCTENUS.



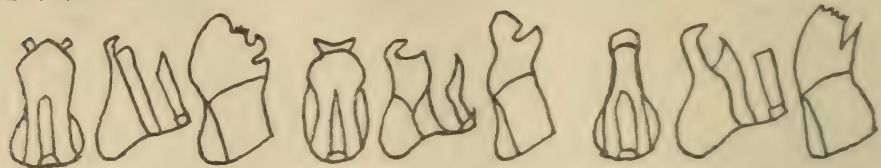
tentas.

1. papias.

2. corytus.

3. praecia.

B.4. PHANUS.

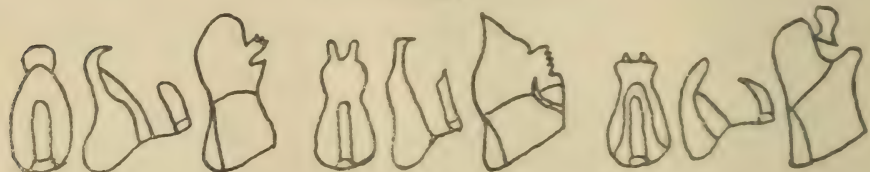


1. vitreus.

2. yilma.

3. obscurior.

B.5. UDRANOMIA.

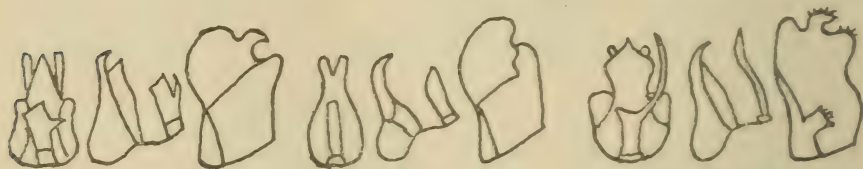


4. marshalli.

1. orcinus.

2. kikkawai.

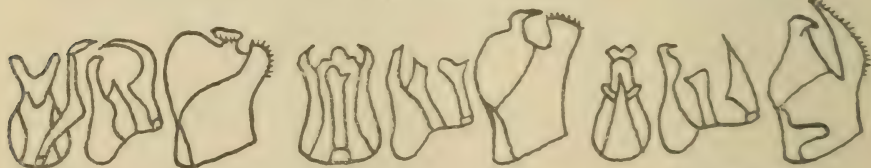
B.6. DREPHALYS.



3. eurus.

4. spitzi.

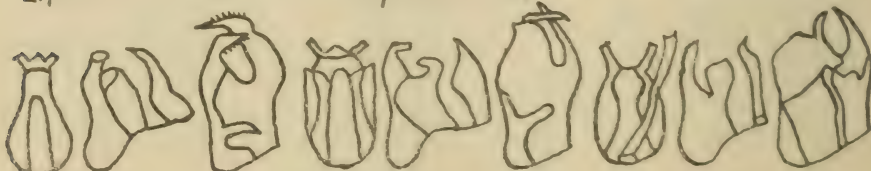
1. helixus.



2. phoenicoides.

3. phoenice.

4. durnarll.

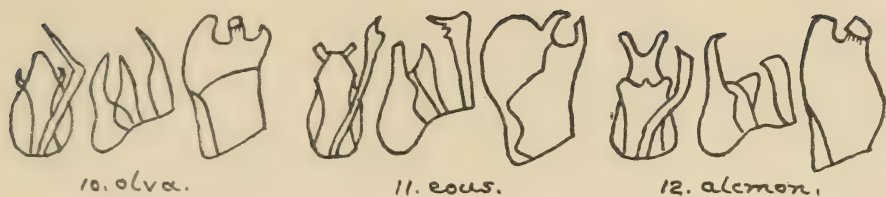


5. oriander.

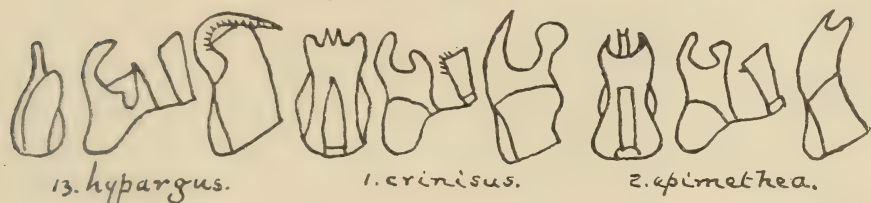
6. talboti.

8. opifex.

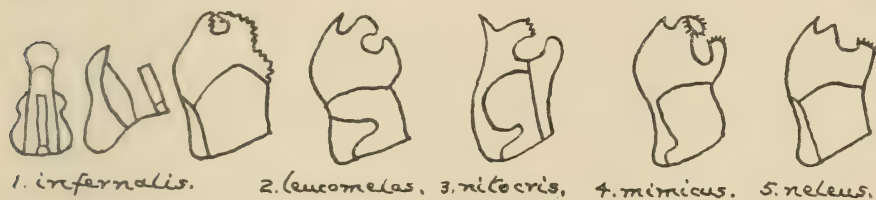
B.6. DREPHALYS.



B.7. AUGIADES.

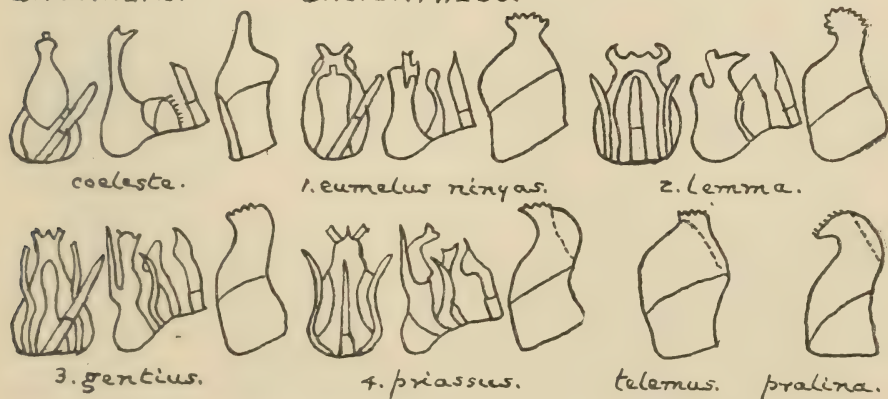


B.8. HYALOTHYRUS.

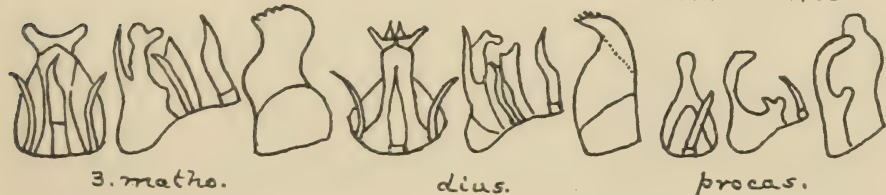


B.9. PHAREAS.

B.10. ENTHEUS.



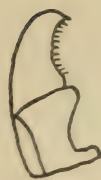
B.11. CABIRUS.



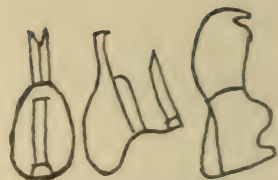
C.1. PROTEIDES.



1. mercurius.

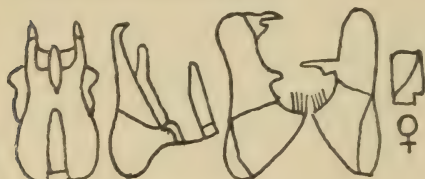


sanantonio.



2. maysi.

C.2. EPARGYREUS.



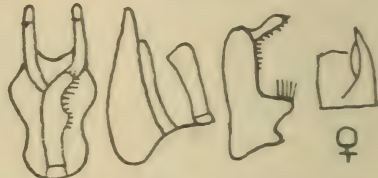
1. enispe.



2. zestos.



3. clarus. 4. antaeus. 5. spanna.



6. barisses.



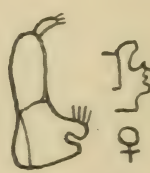
7. tmolis.



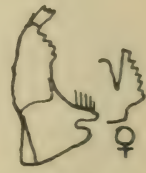
8. socus.



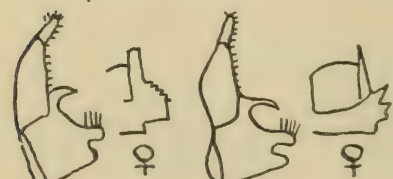
9. exadeus.



10. nutra.



11. aspina.

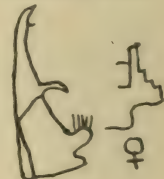


12. spina.

13. spinta.



14. clavicornis.



15. spinosa.



C. 3. POLYGONUS.

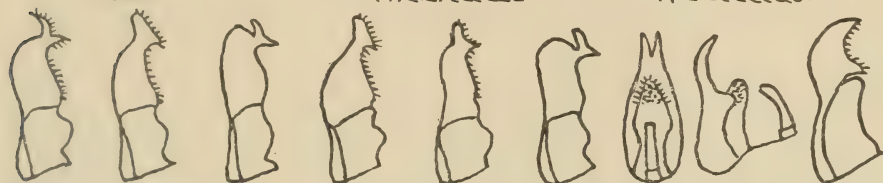
C. 4. CHIOIDES.



1. *leo*.

2. *manueli*

1. *catillus*.

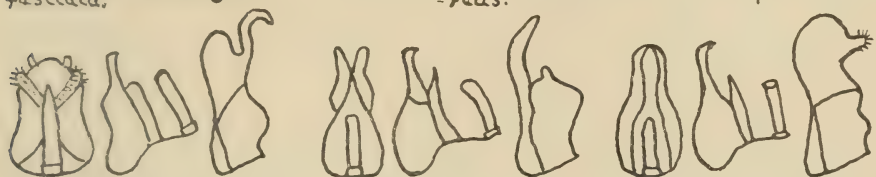


*albo-*  
*fasciata*.

*albus*. *jethira*. *chuyehi*. *cine-*  
*-reus*.

*vintra*.

3. *zilpa*.

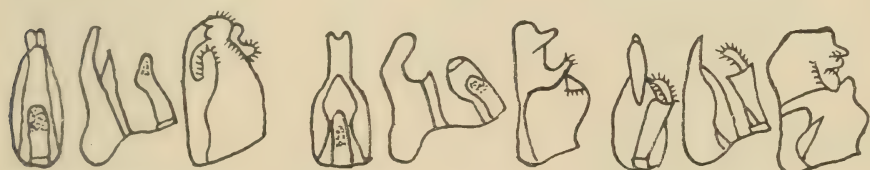


2. *iverna*.

4. *lxion*.

5. *marmorosa*.

C. 5. AGUNA.



1. *asander*

2. *megacles*.

3. *claxon*.



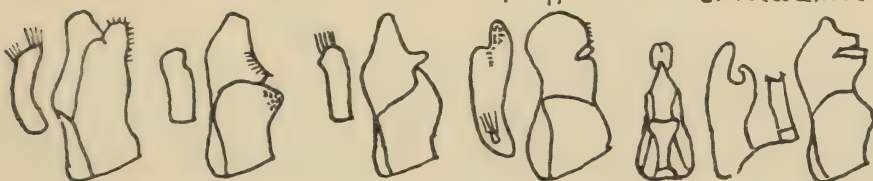
4. *cina*

5. *aurunca*

6. *corlus*

7. *hypozonius*.

8. *williamsi*



9. *garna*.

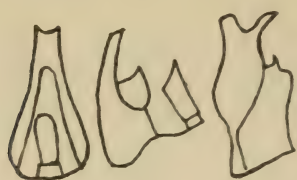
10. *cirrus*.

11. *metopis*.

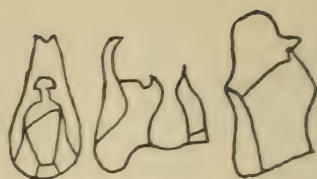
12. *camagura*

13. *albistria*

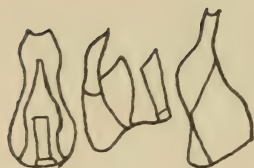
C.6. TYPHEDANUS.



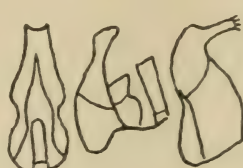
1. orion.



2. undulatus.



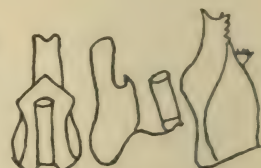
3. galbula.



4. optica.



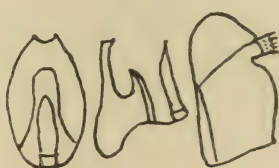
goya.



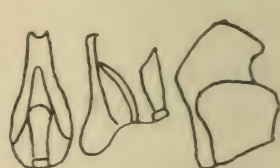
5. stylites.



6. aziris.



7. umber

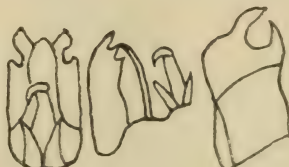


8 ampyx.

C.7 POLYTHRIX.



1. octomaculata.

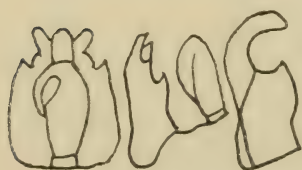


2. roma



3. asine

4. firtius.



5. gygas.



6. callias.

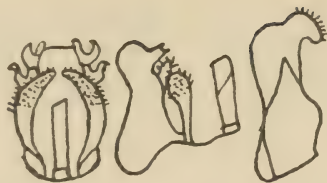


7. procerus.

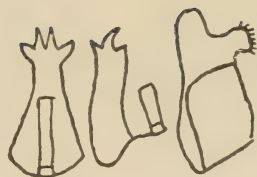
C.7. POLYTHRIX.



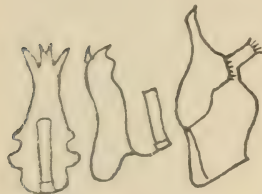
8. minvanes.



9. cecilius.



10. caenus.



11. auginus.



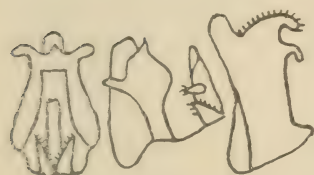
12. metallescens.



13. eudoxus.

C.8. HERONIA.

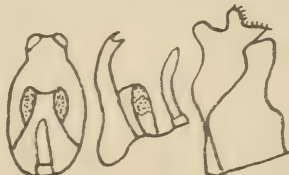
C.9. CHRYSOPLECTRUM.



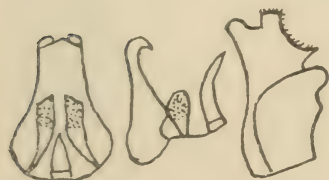
labriaris.



1. pervivax.



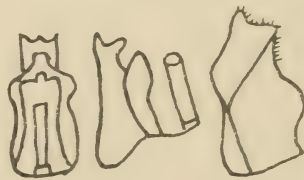
3. striades.



4. perniciosus.

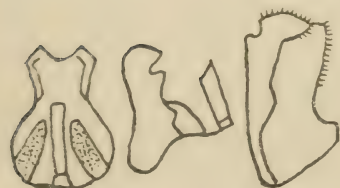


epicincia.



5. orpheus.

C.10. ZESTUSA.



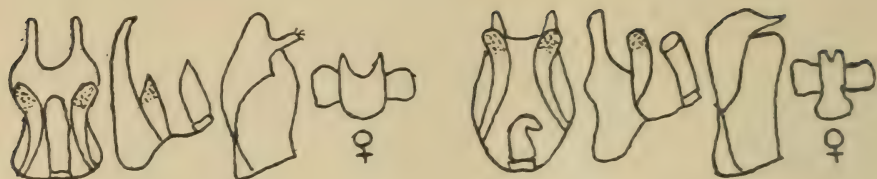
6. perna.



1. dorus.

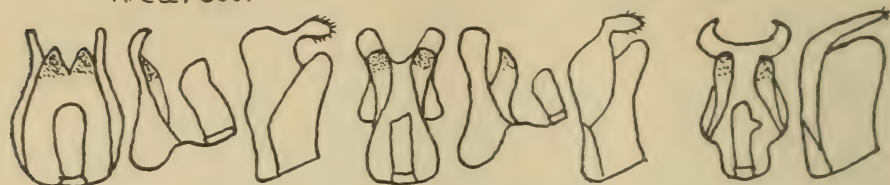
2. standingeri.

C. 11. CODATRACTUS.



1. carlos.

2. alcaeus.



3. aminias.

4. arizonensis.

5. melon.



6. cyledis.

7. cyda.

8. bryaxis.

9. hystor.

C. 12. RIDENS.



1. crison

2. ridens

3. biolleyi.

4. harpagus.



5. philistus.

6. mephitis.

7. fulminans.

8. fulima.

9. panche.



10. pacasa

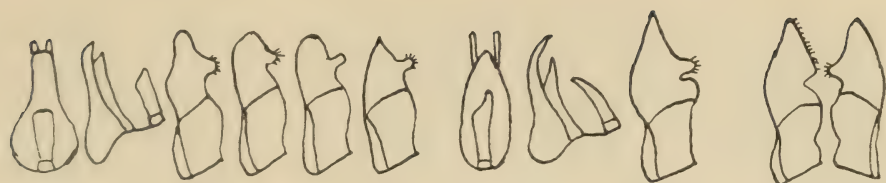
11. bridgmani.

12. nora.

13. tristis.



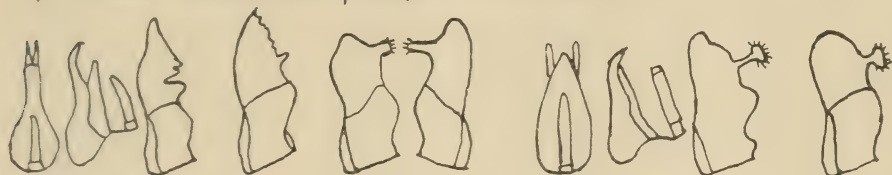
C.13. URBANUS.



1. proteus. variations of clasp.

2. viterboana.

alva.



3. pronta. 4. huancavillas. 5. pronus.

6. esmeraldus.

7. esma.



8. evona

9. elmina.

10. esta.

11. acawelos.

12. dorasites.



13. telus.

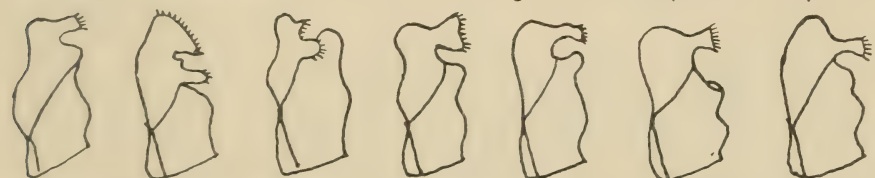
14. tanna.

15. cindra.

16. zagorus.

17. simplicius.

18. procre.



19. evenus.

20. athesis.

21. mittas.

22. carmelita.

barra.

23. chales.

24. reductus.



25. dorysses.

26. albimargo.

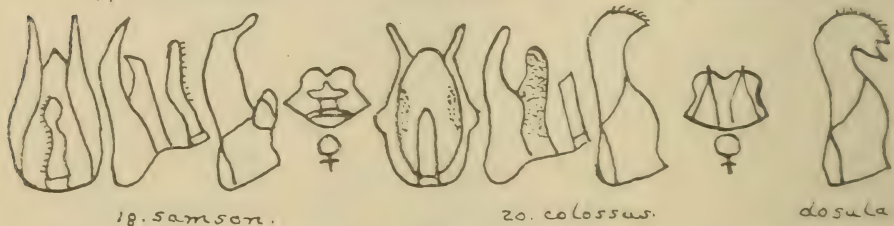
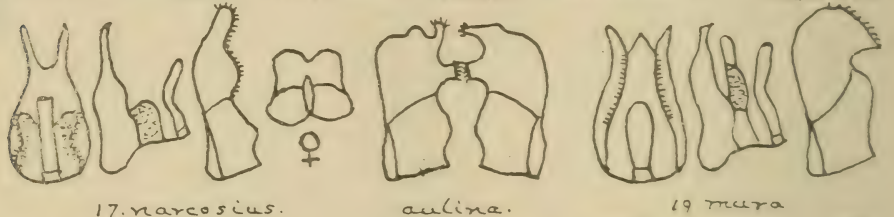
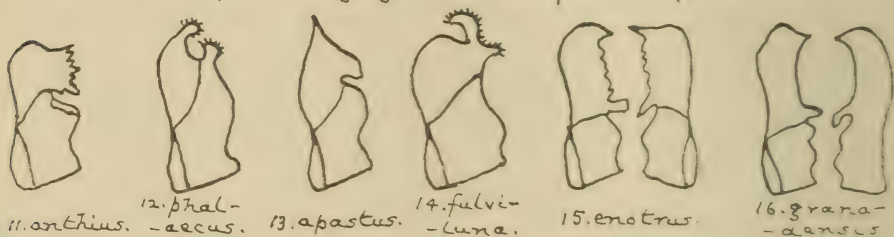
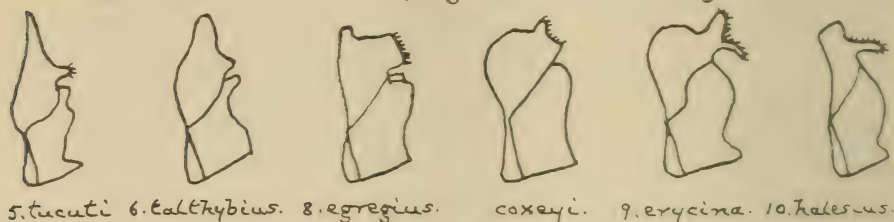
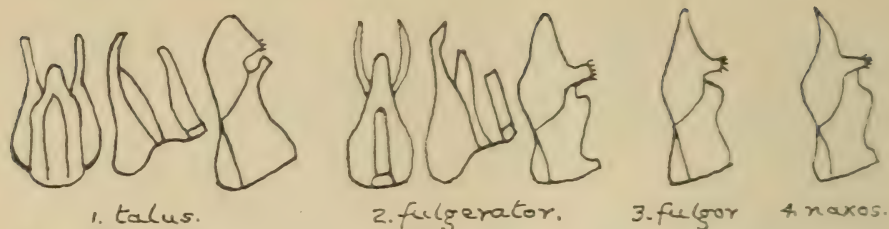
takuta.

rica.

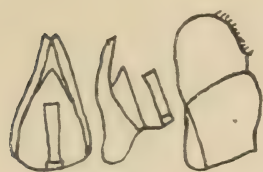
27. virescens.

28. chalco.

C.14. ASTRAPTES.



C. 14. ASTRAPTES.



23. megalurus.



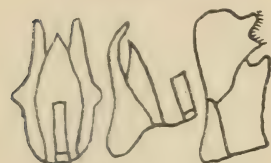
24. elorus.



25. alardus.



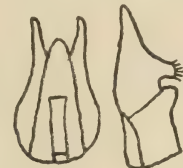
26. alector.



27. albus.



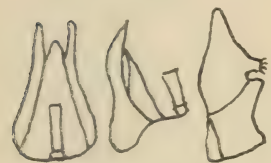
28. cretus.



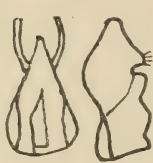
29. latimargo.



30. chiniquensis.



31. jaira.



32. cassander.

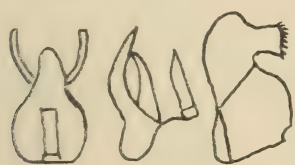


33. galesus.



34. anaphus.

C. 15. CALLIADES.

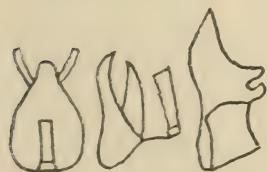


1. oxyx.



2. zeutus.

C. 16. AUTOCHTON.



1. cellus.



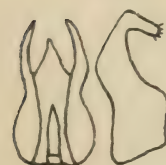
2. pseudocellus.



3. cincta.



4. vectilucis.



5. integrifascia.



6. nais.



7. reflexus.



8. longipennis.



9. zarex.

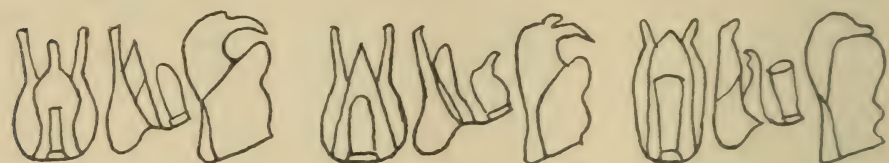
C. 16. AUTOCHTON.



10. *bipunctatus*. 11. *sulfureolus*. 12. *itylus*.

13. *electrus*.

C. 17. ACHALARUS.



1. *lyciades*.

2. *casica*.

3. *albociliatus*.



4. *toxus*. A. B. C. D. E.

5. *jalapus*.

C. 18. VENADA.

C. 19. THORYBES.



*advena*.

1. *drusus*.

2. *pylades*.

3. *daunus*.

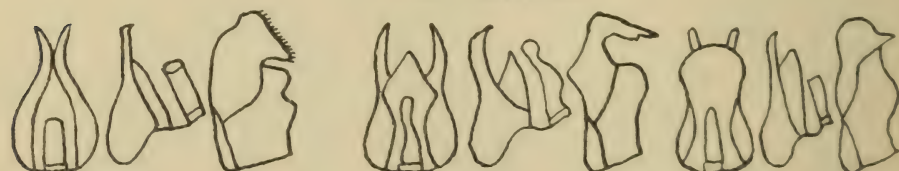


4. *diversus*.

5. *mexicana*.

*nevada*. *dobra*. *confusus*.

C. 20. CABARES.



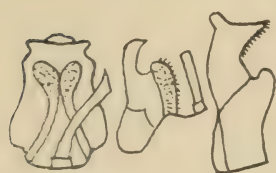
*decia*.

1. *patricillo*.

3. *rinta*.



D.1. BUNGALOTIS.



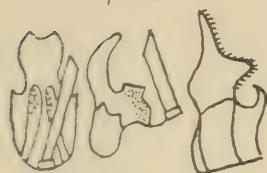
1. erythus.



2. diophorus.



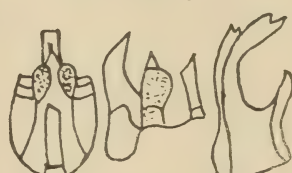
2. midas.



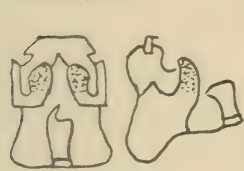
4. astylos.



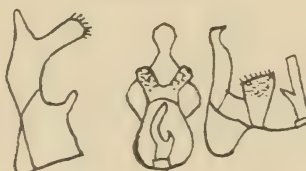
5. borax.



lactos.



6. quadratum.



7. clusia.

D.2. SALATIS



1. canalis.

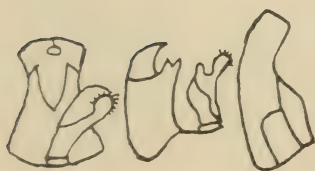


2. salatis.



3. cebrenus.

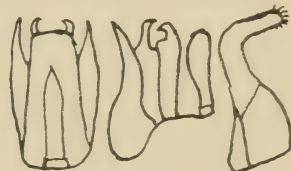
D.3. SARMIENTOTA.



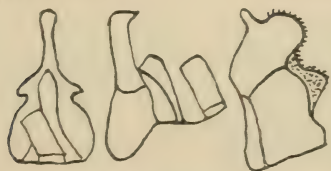
4. fulvius.



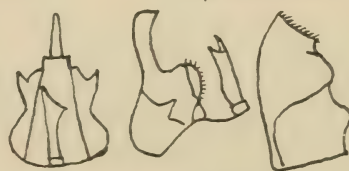
5. scytus.



1. phaselis.

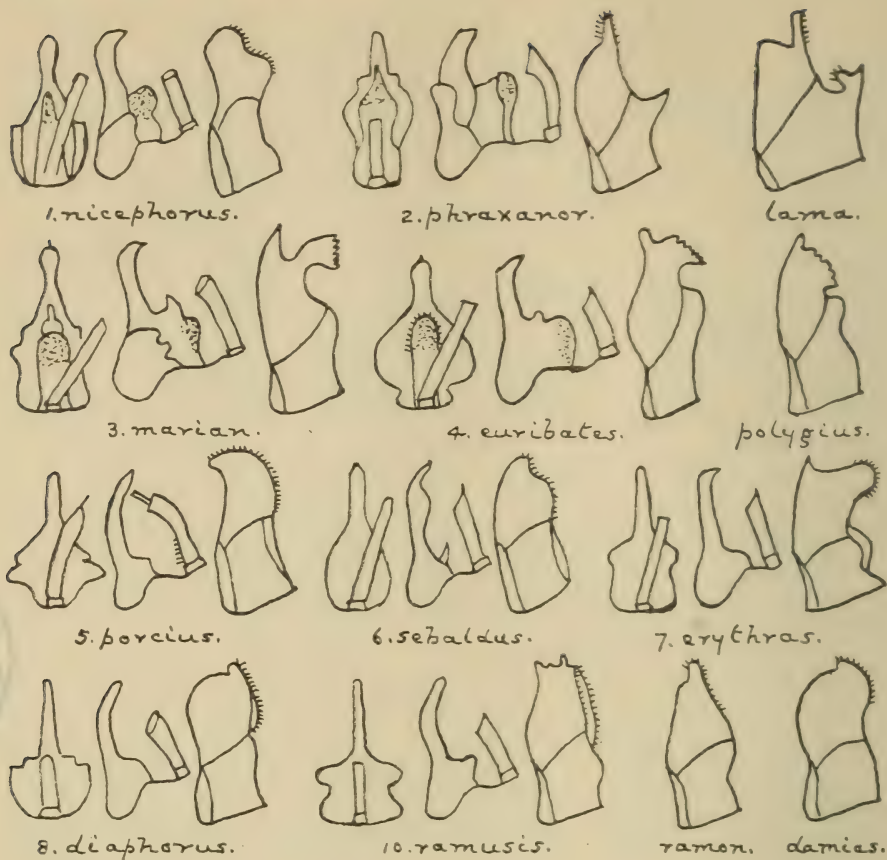


2. eriopis.

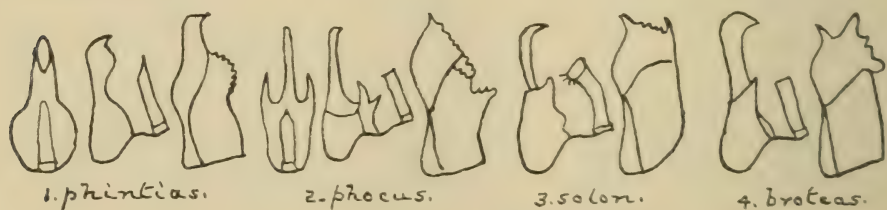


3. dinka.

D. 4. DYSOPHELLUS.



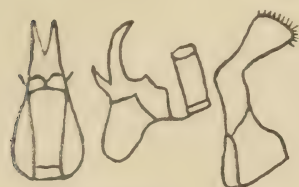
D. 5. NASCUS.



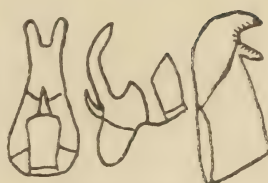
D. 6. CEPHISE.



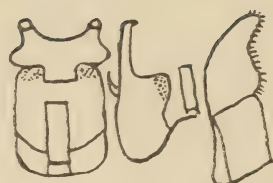
D.7. PORPHYROGENES.



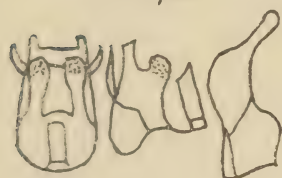
1. *stupa*.



2. *passalus*.



3. *soyorcula*.



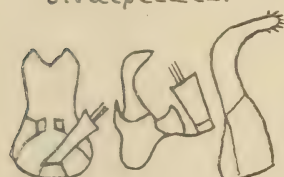
5. *vulpecula*.



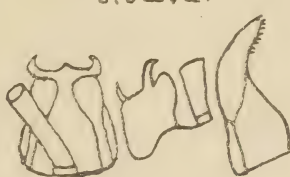
6. *suva*.



7. *zohra*.



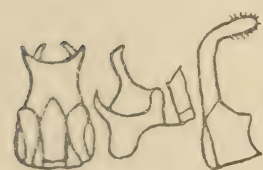
8. *boliva*.



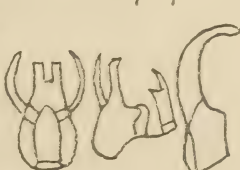
9. *spoda*.



10. *despecta*.



11. *pausias*.



12. *spanda*.



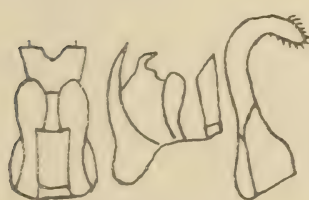
13. *sparta*.



14. *glavia*.

D.8. OCTBA.

D.9. ABLEPSIS.



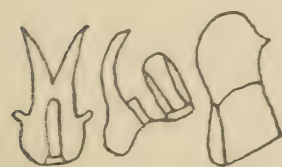
*calathana*.



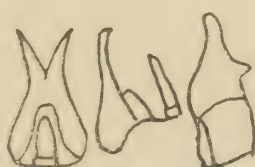
1. *azines*.



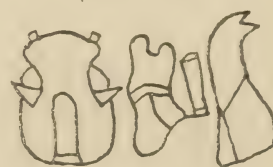
2. *fenestratus*.



3. *vulpinus*.



*guyanensis*.



4. *amazonensis*.



*D. 10. ORNEATES.*

*D. 11. CELAENORRHINUS.*

